UNITED STATES ENVIRONMENTAL
PROTECTION AGENCY
REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

ACTION MEMORANDUM (RV2)

DATE: September 23, 2021

SUBJECT: Request for Approval of Project Ceiling Increase, 12-Month and $2 Million Exemptions for CERCLA Removal Action at the TechCity Superfund Site, Town of Ulster, Ulster County, NY

FROM: Pat Evangelista, Director
Superfund and Emergency Management Division
Evangelista, Pat Digitally signed by Evangelista, Pat Date: 2021.09.23 16:16:02 -04'00'

THRU: Kathleen Salyer, Director
Office of Emergency Management
BRENDAN ROACHE Digitally signed by BRENDAN ROACHE Date: 2021.09.27 11:05:48 -04'00'

TO: Barry N. Breen, Acting Assistant Administrator
Office of Land and Emergency Management

Site ID: A27N

I. PURPOSE

The purpose of this Action Memorandum is to request and document a project ceiling increase and exemptions from the 12-month and $2-million statutory limitations for the selected removal action at the TechCity Superfund Site (Site) in the Town of Ulster, Ulster County, New York. This is the second action memorandum and covers removal activities (RV2) to be taken by the U.S. Environmental Protection Agency (EPA) at the Site. The purpose of the RV2 removal activities is to mitigate the potential threat posed to public health, welfare, or the environment by friable asbestos present in Building 1 and in three large debris piles generated from the demolition of former Building 25 at the Site. The proposed mitigation actions include the removal and off-Site disposal of the three debris piles along with the asbestos abatement or demolition and off-Site disposal of Building 1. This Action Memorandum requests approval of an additional $14,447,000, of which $11,830,000 is for mitigation contracting. The new proposed project ceiling for the Site will be $14,947,000, of which $12,305,000 is for mitigation contracting.

The Site meets the criteria for a removal action under the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended (CERCLA), 42 U.S.C. § 9601-9675, as described in Section 300.415(b) of the National Contingency Plan (NCP), 40 C.F.R. § 300.415(b).

The Site is not included or proposed for inclusion on the National Priorities List (NPL).

With asbestos being the primary contaminant of concern, in accordance with EPA policy, approval of this Action Memorandum is being sought from the Office of Emergency Management (OEM) and the Office of Land and Emergency Management (OLEM) since the proposed removal activities qualify as nationally significant or precedent setting. It should be noted that EPA commenced emergency removal activities at the Site in March 2020 due to conditions EPA identified and the determination that EPA needed to immediately address the release or threat of release of friable asbestos at and from the Site. The emergency activities taken and completed to date included demolition of Building 2, which was necessary to prevent immediate threats posed by exposed asbestos at Building 2, which had been partially demolished.

II. SITE CONDITIONS AND BACKGROUND

The Site is located within a 258-acre industrial complex constructed by the International Business Machines Corporation (IBM) in 1955 and operated by IBM for over 30 years. The Site contains numerous buildings and support structures. The Site was purchased from IBM by two related entities, AG Properties of Kingston, LLC (AG Properties) and Ulster Business Complex, LLC (UBC) in February 1998. The Site is operated and managed by a third related entity, TechCity Properties, Inc. (TechCity). Various parcels of the facility have been transferred to related limited liability corporations and leased to various tenants since that time. Several buildings were demolished or partially demolished by TechCity from 2015 through 2016.

When EPA first became involved in the Site in May 2017, EPA identified the following areas of concern: 1) the interior of Building 1, which is 270,000 square feet in size where an improper asbestos abatement had occurred; and 2) Building 2, the interior and exterior of which contained friable asbestos and had been partially demolished by TechCity in 2016, but has since been demolished and disposed of off-Site by EPA as part of the RV1 activities (See Section II, B, 1, below). In April 2018, EPA was informed of a third area of concern: three large debris piles classified by the New York State Department of Labor (NYSDOL) as containing regulated asbestos containing materials (RACM), which presumes that the material is or will become friable, which were generated during the demolition of former Building 25.

The areas of concern, which are the subject of this action memorandum, are Building 1 and the Building 25 debris piles. Building 1 contains friable asbestos throughout the interior and this asbestos was disturbed as the result of an improper asbestos abatement. Temporary measures to secure the building have been undertaken but the current conditions are such that asbestos could easily enter the environment through failures in critical barriers, broken windows, cracking walls, roof openings, or in the event of fire. Building 1 adjoins another structure which is currently occupied by commercial tenants. The large debris piles were generated during the demolition of Building 25 in late 2015/early 2016 and have been classified by the NYSDOL as RACM. Temporary tarps covering the piles have been repeatedly torn because the piles contain jagged construction debris and are exposed to rain, snow, and wind. The tarps will continue to degrade and asbestos fibers could become entrained in wind currents and migrate from the Site

to nearby areas utilized by the public. The entire Site, including the RACM debris piles, is unfenced and readily accessible to visitors, and other persons entering the facility, and commercial tenants that routinely drive near the debris piles and Building 1.

The Superfund and Emergency Management System identification number for the Site is NYD001359694. This is a time-critical removal action.

A. Site Description

1. Removal Site Evaluation (RSE)

In April of 2017, EPA received a request for assistance from Ulster County officials to evaluate the Site for CERCLA removal action consideration. In response to that request, EPA's Removal Action Branch (RAB) met on-Site with Ulster County officials on May 4, 2017 to conduct a Site inspection of Buildings 1 and 2 which were left in various stages of asbestos abatement and/or demolition by TechCity's asbestos abatement contractors. In March 2018, Ulster County expanded its request for assistance from EPA to include three large debris piles which were generated from the demolition of Building 25.

Building 1 is an expansive one-story structure which had undergone an improper asbestos abatement by TechCity's asbestos abatement contractors in 2016. On August 1, 2016, NYSDOL inspected Building 1 asbestos abatement activities and observed several individuals conducting the dry removal of asbestos which was causing visible asbestos emissions throughout the Building. Inspectors noted several violations and issued a stop work order to the TechCity asbestos abatement contractors for violations of New York State Industrial Code Rule 56 (12 NYCRR Part 56). NYSDOL subsequently determined that the entire interior of the structure was contaminated with friable asbestos due to the improper asbestos abatement activities. In March 2017, Ulster County took title to Building 1 through tax foreclosure proceedings and in October 2017, the County commissioned an Asbestos Contamination Assessment which confirmed NYSDOL's determination that friable asbestos was present on all interior surfaces throughout the 270,000 square foot structure (see Attachment 2 - Asbestos Contamination Assessment Report, Envirologic of NY, Inc., November 10, 2017). The widespread presence of asbestos in Building 1 was first documented in a September 1996 asbestos survey conducted on behalf of Ulster Business Complex Realty Corporation, now known as TechCity Properties, Inc., prior to the 1996 purchase of the Site by AG Properties and UBC, which documented what was then intact asbestos containing materials throughout the building.

The large piles located on the slab of former Building 25 are situated approximately 200 feet south of Building 1. The piles are estimated to contain approximately 18,000 tons of pulverized demolition debris which was sampled and analyzed for asbestos by TechCity's 3rd Party Asbestos Consultant/Monitor, Hudson River Valley Environmental, LLC (HRVE) (see Attachment 3 - Asbestos Contamination Assessment, HRVE, LLC, July 17, 2017). The HRVE report notes that the pulverized material included two samples

of mastic which tested positive for asbestos and identified vermiculite in several of the samples.

Since a pre-demolition asbestos survey was not conducted prior to the demolition of Building 25, the asbestos regulating agency in the State of New York, NYSDOL, determined that vermiculite present in the debris piles is friable asbestos. It should be noted that sampling was conducted by HRVE in Building 25 prior to demolition (see Attachment 3 - Laboratory Results, Atlas Environmental Lab Corp, September 15, 2015). This pre-demolition sampling event, while it did not constitute a pre-demolition asbestos survey under NYSDOL regulations, it did identify floor tile containing 14% chrysotile asbestos as well as other samples containing vermiculite, both of which were not abated prior to demolition and are now mixed with the other masonry materials from the demolition. The three debris piles contain mostly pulverized masonry material, however asbestos-containing floor tile, asbestos-containing mastic, and vermiculite are co-mingled in the debris. The debris piles were classified by NYSDOL as containing friable asbestos and RACM.

NYSDOL's determination that the debris piles are friable RACM is also due to the presence of vermiculite in multiple samples of the demolition debris from Building 25. According to EPA recommendations, as cited by NYSDOL, a party should assume that vermiculite insulation contains asbestos. See, U.S. EPA, Protect Your Family from Asbestos-Contaminated Vermiculite Insulation, https://www.epa.gov/asbestos/protect-your-family-asbestos-contaminated-vermiculite-insulation. Historically, most of the world's vermiculite originated from a mine in Libby, Montana, that was closed in 1990 due to high levels of asbestos contamination. Because there is no mechanism to visually distinguish between vermiculite from the Libby mine versus other mines, as well as evidence of inaccuracies in analytical methodologies to rule out asbestos contamination in vermiculite, EPA continues to emphasize caution when managing asbestos from an unknown source. The New York State Department of Health (NYSDOH) has issued guidance consistent with EPA's approach to vermiculite and NYSDOL has incorporated this into its regulations (see Attachment 4 - Vermiculite Evaluation Guidance Document, NYSDOH August 12, 2012 at:
https://dol.ny.gov/system/files/documents/2021/03/vermiculite-guidance_rev082712.pdf

The Site has been determined to pose an immediate public health threat to individuals frequenting the Site. These individuals include tenants, visitors, persons utilizing nearby on-Site public athletic fields. The Site is unsecured and readily accessible to both pedestrians and vehicles.

2. Physical location

The Site is located at 300 Enterprise Drive in the Town of Ulster in Ulster County, New York, 12401 (41.9685955°N, -74.0082493°W). The Site is located within a 258-acre industrial complex bordered by residential properties to the north and south, an active railway and commercial district to the east, and the Esopus Creek and adjoining woodlands to the west. In order to better meet the Agency's responsibilities related to the

protection of public health and the environment, EPA has developed a environmental justice (EJ) mapping and screening tool called EJSCREEN. Using this tool, EPA conducted a preliminary screening of the Site for EJ concerns and did not identify any EJ concerns. Youth soccer fields are located within the boundaries of the Site, less than ¼ mile to the south of the former Building 25 RACM debris piles (see Attachment 1, Site Map). Winds are predominantly out of the north and west, moving in the direction of the youth soccer fields, residential and commercial properties immediately to the south of the fields, and a large commercial district ¼ mile to the east.

3. Site characteristics

The industrial complex at the Site was constructed by the International Business Machines Corporation (IBM) beginning in the late 1950s and is comprised of numerous large production and office buildings. Subsequent to IBM ending operations at the facility in the late 1980s, the entire Site was purchased in 1998 by AG Properties, LLC and Ulster Business Complex, LLC and has been operated as TechCity. Although several of the buildings have been tenant-occupied since 1998, many of the buildings are now either abandoned or have been demolished. Former Building 25 was determined to be RACM by NYSDOL and Building 1, which is only temporarily secured, contains asbestos throughout the building and was the subject of an improper asbestos abatement. The Site is unsecured with visitors and commercial tenants routinely driving near the debris piles and Building 1.

This is the second Action Memorandum (RV2) for the Site. Mitigation activities taken under RV1 are documented in Section II-B of this memorandum.

4. Release or threatened release into the environment of a hazardous substance, or pollutant, or contaminant

As indicated in Section II., A.1., sampling and analysis identified friable asbestos, a CERCLA hazardous substance, as defined in Section 101(14) of CERCLA, 42 U.S.C. § 9601(14) and listedin 40 CFR Table 302.4, as being present at the Site. The Site is a facility within the meaning of Section 101(9) of CERCLA, 42 U.S.C. § 9601(9), and the presence of asbestos as observed and documented at the Site constitutes a “release” or threat of release within the meaning of Section 101(22) of CERCLA, 42 U.S.C. § 9601(22).

Substances Identified	Statutory Source for Designation as a Hazardous Substance
Asbestos	307(a) CWA, 112 CAA*

*Section 307(a) of the Clean Water Act and Section 112 of the Clean Air Act.

Asbestos, when friable, is designated as a CERCLA hazardous substance. Friability is the ease with which a material can be crumbled, pulverized, or reduced to powder when dry, by applying hand pressure. The degree of friability of the RACM determines the potential for fibers to be released into the air. The RACM is co-mingled with non-asbestos demolition debris.

The mechanism for the release or threat of release of friable asbestos into the environment includes dispersion or emission from Building 1 and the RACM piles, which contain friable asbestos in an unsecured and/or deteriorated condition that have not been permanently abated.

Conditions at the Site associated with Buildings 1 and the Building 25 RACM debris piles meet the requirements of Section 300.415(b) of the NCP for the undertaking of a CERCLA removal action.

5. NPL status

The Site is not listed on the NPL, nor is it proposed to be listed.

6. Maps, pictures, and other graphic representations

A Site map is included in Attachment 1.

A. Other Actions, to Date

1. Previous actions

Following EPA's initial Site inspection with Ulster County officials on May 4, 2017, EPA contacted NYSDOL for guidance on the actions that would be required to ensure compliance with the applicable regulations for completion of asbestos abatement activities at the Site. The resulting NYSDOL guidance and variances required TechCity to undertake the following asbestos abatement activities: removal of the abandoned trailers and off-Site disposal of the RACM inside the trailers which was generated during the improper asbestos abatement of Building 1; installation of critical barriers on Buildings 1 and 2; and application of an asbestos encapsulant on the partially demolished Building 2. These actions were performed voluntarily by TechCity pursuant to NYSDOL approved variances utilizing NYSDOL certified asbestos abatement contractors between June 16, 2017 and February 16, 2018 and comprised the removal activities designated by EPA as PJ1.

In March 2018, EPA was notified that NYSDOL had classified the three Building 25 demolition debris piles as RACM. In response to this classification and at the urging of EPA and NYSDOL, TechCity's asbestos abatement contractor covered the RACM piles with temporary tarps in April 2018 to mitigate the potential migration of friable asbestos present in the form of loose bulk vermiculite. Due to the inadequate size and composition of the tarps, weather conditions quickly lead to their failure to provide adequate coverage over the RACM piles. TechCity's asbestos abatement contractors repaired and/or replaced and re-anchored the tarps on June 22, 2018 and September 24, 2018. These removal activities were designated by EPA as PJ2. In February 2020, TechCity's asbestos abatement contractor installed larger and more durable tarps with an improved anchoring system. The current temporary covering over the debris piles is largely intact and is

serving as an interim measure to limit the migration of friable asbestos to the environment and the potential for direct contact by the public.

Following TechCity's performance of interim measures to control the threat of asbestos present at the Site (including the temporary tarps), TechCity was unwilling to undertake the necessary actions for the complete removal and mitigation of the asbestos threats at and from the Site. On February 12, 2020, the Division Director of EPA's Superfund and Emergency Management Division verbally authorized funding to commence a CERCLA emergency removal action. Removal activities authorized under the verbal authorization and a May 3, 2021 RV1 Action Memorandum (see Attachment 1) included the repair of critical barriers on Building 1, the demolition and off-Site disposal of Building 2, and the installation of more effective tarps on the Building 25 RACM debris piles as needed.

Acting upon the verbal authorization of funding, EPA initiated RV1 removal activities at the Site on March 13, 2020. RV1 activities included the demolition and off-Site disposal of Building 2 utilizing EPA's Emergency Response and Remediation Services (ERRS) contractor which performed all NYSDOL-regulated asbestos activities under the oversight of a NYSDOL licensed 3rd Party Asbestos Consultant/Air Monitoring contractor. As of March 26, 2020, all field activities relating to the demolition and off-Site disposal of Building 2 were completed, resulting in the off-Site disposal of 225 tons of RACM and the off-Site recycling of 150 tons of decontaminated steel. Prior to demobilizing from the Site on March 26, 2020, ERRS also completed the following activities relating to Building 1: repair of critical barriers as needed, posting of asbestos warning signs at all entry ways, and installation of fencing along the eastern side of the building to limit access to portions of the building exterior where physical hazards from loose masonry material was present. To date, installation of new temporary tarps on the Building 25 RACM debris piles as authorized under RV1 has not been performed but would eventually be required due to weathering. TechCity has been monitoring the tarps and continues to provide weekly photo documentation of the covered debris piles.

2. Current actions

As interim mitigation activities, the Building 25 debris piles were covered several times with tarps by TechCity beginning in April 2018 and most recently in February 2020. TechCity's property manager continues to inspect the piles on a weekly basis and after severe weather events. Photo documentation of these inspections is provided to EPA by TechCity. As authorized in the May 3, 2021 RV1 Action Memorandum, EPA is prepared to re-cover the piles as necessary.

Building 1 is currently secured with temporary critical barriers to limit the potential threat for a release of friable asbestos to the environment and to control the potential for direct contact with friable asbestos to trespassers who may enter the building.

B. State and Local Authorities' Role

1. State and local actions, to date

NYSDOL, Ulster County, and the Town of Ulster continue to work in close coordination with EPA on all asbestos related issues at the Site.

On May 26, 2021, NYSDEC issued a Notice of Violation (NOV) to TechCity for the unlawful staging of demolition debris at the Site for longer than 12 months. The NOV includes the Building 25 debris piles and several large debris piles in proximity to other Site buildings.

2. Potential for continued State/local response

Other than EPA's ongoing coordination with NYSDOL, Ulster County, and the Town of Ulster on matters pertaining to asbestos present on-Site, and the NOV issued by NYSDEC in May 2021, there are no actions planned or being taken by the State or local government agencies to address the RACM present on-Site. The proposed EPA activities are a result of requests for assistance from Ulster County and the inability of State or local government entities to undertake the actions necessary to permanently address the public health threat posed by the friable asbestos present at the Site.

III. THREAT TO PUBLIC HEALTH, OR WELFARE, OR THE ENVIRONMENT, AND STATUTORY AND REGULARTORY AUTHORITIES

The ongoing threat of future releases of friable asbestos, a CERCLA hazardous substance, to the environment has been well documented at the Site including in reports and in the determinations of NYSDOL.

Friable asbestos is a hazardous substance as defined by Section 101(14) of CERCLA, 42 U.S.C. § 9601(14), and is listed in Table 302.4 of the NCP, 40 CFR § 302.4. The NYSDOL has determined that the Building 25 debris piles contain friable asbestos in the form of loose bulk vermiculite and have classified the piles as RACM. Furthermore Building 1 was subject to an improper abatement of asbestos and is contaminated throughout with friable asbestos. Asbestos under the current Site conditions is considered a potential public health threat.

Asbestos mainly affects the lungs and the membrane that surrounds the lungs. Breathing high levels of asbestos fibers for a long time may result in scar-like tissue in the lungs and in the pleural membrane (lining) that surrounds the lungs. This disease is called asbestosis and is usually found in workers exposed to asbestos. People with asbestosis have difficulty breathing, often a cough, and in severe cases, heart enlargement. Asbestosis is a serious disease and can eventually lead to disability and death. Breathing lower levels of asbestos may result in changes called plaques in the pleural membrane. Pleural plaques can occur in workers and sometimes in people living in areas with high environmental levels of asbestos. Effects on breathing from pleural plaques alone are not usually serious, but higher exposure can lead to a thickening of the pleural membrane that may restrict breathing.

The conditions at the Site, including the fact that friable asbestos has been released to the environment, meet the criteria for a CERCLA removal action as described in the NCP, 40 CFR Section 300.415(b)(2). The following criteria are directly applicable to the threats that existed andcontinue to exist at the Site:

Actual or potential exposure to nearby human populations, animals, or the food chain fromhazardous substances, or pollutants or contaminants.

There is a threat to human health posed by the friable asbestos that is present in Building 1 and the three piles containing RACM at the Site. Since the Site is not secured, there is a threat to persons who enter the Site (*i.e.* tenants, visitors, trespassers, and children using the on-Site soccer fields). Should the tarps covering the debris piles or the critical barriers securing Building 1 be compromised, there is the potential for exposure to asbestos fibers which may be released into the air. Any entry into Building 1 could result in tracking of asbestos out of the Building and release into the air. Any such releases would then pose a threat to residential and commercial areas at and near the Site.

Weather conditions that may cause hazardous substances, or pollutants or contaminants to migrate or be released.

Friable asbestos is present in the Building 25 RACM debris piles and in Building 1. The tarps covering piles are subject to weathering, potentially releasing asbestos fibers into the environment. Once in the environment, the stable mineral fibers persist and do not break down further. Steady northerly to westerly winds traveling across the Site could result in asbestos fibers being entrained in the air as the tarps and Building 1 deteriorate, resulting in the spread of asbestos fibers to the environment impacting areas frequented by the public, tenants of adjoining buildings, and persons visiting and/or utilizing the on-Site soccer fields. The condition of Building 1 is such that adverse weather could negatively impact the temporary critical barriers resulting in asbestos migration or release.

Threat of fire or explosion.

Building 1 is unoccupied and has no functional sprinkler system. In the event of fire, the asbestos that is throughout the building could be released to the environment.

The availability of other appropriate federal or State response mechanisms to respond to the release.

EPA is the only government agency capable of taking timely and appropriate action to respond to the threat posed by the presence of hazardous substances at the Site. NYSDEC is unable to address the asbestos.

IV. ENDANGERMENT DETERMINATION

Actual or threatened releases of asbestos, a hazardous substance, from the Site present an imminent and substantial endangerment to public health, or welfare, or the environment.

V. EXEMPTION FROM STATUTORY LIMITS

Section 104(c)(1) of CERCLA, 42 U.S.C. § 9604(c)(1), limits federal response actions to 12-months and $2 million unless the criteria are met for exemption. In this case, the immediate risks to human health, welfare, or the environment posed by the asbestos at the Site warrants the emergency exemption as follows:

A. Emergency Exemption

1. There is an immediate risk to public health, or welfare, or the environment;

Since the inception of the emergency removal action at the Site, the presence of friable asbestos in the Building 25 RACM debris piles and throughout Building 1 continue to pose an immediate risk to public health, welfare, or the environment. The temporary tarps covering the piles are exposed to rain, snow, and wind and will continue to degrade, resulting in asbestos fibers becoming entrained in wind currents and migrating from the Site to nearby areas utilized by the public. Building 1's critical barriers are a temporary measure to secure the building, which is not maintained and in disrepair providing conditions for asbestos to enter the environment through failures in the critical barriers, broken windows, cracking walls and roof openings. The nearest residential properties are located approximately ¼ mile south of the RACM debris piles. Building 1 adjoins another structure which is currently occupied by commercial tenants. The Site is unsecured with visitors and commercial tenants routinely driving near the debris piles and Building 1.

2. Continued response actions are immediately required to prevent, limit, or mitigate an emergency; and

NYSDOL determined that the debris piles are RACM. The tarps covering the piles are exposed to various weather conditions which will inevitably cause degredation of the covers resulting in the release of asbestos fibers to the environment. Continued response actions are immediately required to mitigate the potential threats associated with the release of asbestos from the debris piles and Building 1. Without implementing the response action proposed in this Action Memorandum, asbestos fibers will be released and will migrate resulting in the potential for direct contact by individuals in the immediate vicinity of the Site. This includes neighboring residents, visitors, trespassers, and the families and players of youth soccer leagues utilizing the on-Site athletic fields for recreational events.

3. Assistance will not otherwise be provided on a timely basis.

No other government entity or potentially responsible party (PRP) will provide assistance on a timely basis to mitigate the risks to public health, or welfare, or the environment present at the Site.

On September 16, 2020, EPA issued Administrative Order for a Removal Action, Index No. CERCLA-02-2020-2038 (Order) that directs six PRPs (Respondents) to abate the remaining significant threats posed by the friable asbestos in the RACM piles and Building 1. Despite initial compliance with the Order by three of the Respondents, including finalization of an approved workplan and sealing of Building 1, these parties are out of compliance with the Order for failure to commence removal of the RACM piles by the required due date of May 12, 2021, as well as other Order requirements.

VI. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Actions Proposed

1. Action description

The proposed removal activities in this Action Memorandum are necessary to mitigate the potential threats posed by the asbestos contaminated materials identified herein. The activities proposed include the removal and off-Site disposal of the three large Building 25 RACM piles as well as asbestos abatement and/or demolition and off-Site disposal of Building 1. The debris piles are comprised primarily of pulverized concrete comingled with friable asbestos (vermiculite) and have a total estimated disposal weight of approximately 18,000 tons. Building 1 encompasses a footprint of approximately 270,000 square feet and is estimated to contain 27,000 tons of mixed masonry and RACM. The large tonnage of RACM requiring disposal, combined with the lack of acceptable disposal facilities near the Site, contributes directly to the need for the $2 million exemption for the funding requested in this Action Memorandum.

Detailed tasks associated with the removal activities include the following:

- Secure the facility access points and installation of chain link fencing to deter access to contamination and work areas at the Site and post signs warning of asbestos.
- Develop a project work plans for review by NYSDOL and NYSDEC.
- Develop an Asbestos Project Design in accordance with NYSDOL requirements.
- Develop a Community Air Monitoring Plan.
- Conduct an asbestos survey in Building 1.
- Establish project support facilities including utilities, project offices, personnel decontamination facilities, staging areas, truck scale, fuel storage, etc.
- Delineate work zones and establish containment barriers as appropriate and to the extent practicable in accordance with the project design to limit the migration of asbestos.
- Maintain containment tarps over asbestos contaminated debris until off-Site disposal is arranged and completed.
- Segregate and decontaminate scrap metal, and other materials for recycling.

- Off-Site disposal of any additional hazardous substances identified within Building 1 during the removal action. These substances may include maintenance/chemical materials, lighting ballasts containing PCBs, fluorescent lights, mercury switches/lights, fire extinguishing chemicals, and air conditioning gases/fluids.
- Evaluate and mitigate, to the extent appropriate, potential physical hazards created during the removal activities.

All off-Site disposal of hazardous waste and/or substances will comply with the CERCLA Off-Site Rule, 40 CFR § 300.440. There are no post-removal Site controls anticipated for the Site.

2. Contribution to remedial performance

The response activities documented in this Action Memorandum will address the threat of exposure to friable asbestos present in Building 1 and the Building 25 debris piles. The activities would contribute to the efficient performance of any long-term remedial action with respect to the release or threat of release concerned. There is no long-term remedial action planned for the Site.

3. Engineering Evaluation/Cost Analysis (EE/CA) (for non-time critical actions only)

Because of the time-critical nature of the removal action, an EE/CA was not prepared.

4. Applicable or Relevant and Appropriate Requirements (ARARs)

ARARs within the scope of the removal activities will be met to the extent practicable given the exigencies of the situation. ARARs include the Clean Air Act National Emissions Standards for Hazardous Air Pollutants (40 CFR Part 61 – Subpart M), the Toxic Substances Control Act and its implementing regulations (40 CFR Part 761), and the Resource Conservation Recovery Act and its regulations (40 CFR Parts 260-263, 268).

New York State ARARs include Part 56 of Title 12 of the Official Compilation of Codes, Rules and Regulations of the State of New York at 12 NYCRR Part 56, also known as Rule 56 Asbestos, and 6 NYCRR Part 257.

5. Project schedule

The RV2 removal activities can be initiated upon approval of the funding requested herein and will require approximately 4-8 months for completion.

B. Estimated and Expended Costs

The estimated costs for the work covered by this Action Memorandum are summarized below.

Extramural Costs	Action Memorandum May 3, 2021 (RV1)	Funding Requested in this Memorandum (RV2)	Total Funding Authorized and Requested
Regional Removal Allowance Costs (Total cleanup contractor including labor, equipment, and materials)	$475,000	$11,830,000	$12,305,000
Other Extramural Costs Not Funded by the Regional Allowance			
Total Removal Support Team Costs	$25,000	$210,000	$235,000
Subtotal, Extramural Costs	$500,000	$12,040,000	$12,540,000
Extramural Cost Contingency 20%	-0-	$2,407,000	$2,407,000
TOTAL REMOVAL ACTION PROJECT CEILING	$500,000	$14,447,000	$14,947,000

VII. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

If the proposed actions described in this memorandum are not implemented, the threats posed to human health and the environment by friable asbestos present at the Site will persist. Delayed action may increase public health risks to adjacent populations through prolonged exposure to airborne asbestos.

VIII. OUTSTANDING POLICY ISSUES

There are no known outstanding policy issues associated with the Site at the present time.

IX. ENFORCEMENT

On December 11, 2019, EPA issued a Notice of Potential Liability and Request to Perform Response Action under CERCLA (Notice Letter) to the following PRPs: TechCity, AG Properties, Alan L. Ginsberg, A2 Environmental Solutions, LLC, and Stephanie Laskin. The Notice Letter notified the PRPs of their potential liability under CERCLA for certain areas of the Site and requested that they respond in writing to EPA by December 30, 2019 as to whether they would voluntarily finance and/or perform the work required to address the release and/or threat or release of asbestos at the Site. None of the notified PRPs indicated a willingness to undertake all the work called for by EPA.

On September 16, 2020, Region 2 issued Administrative Order for a Removal Action, Index No. CERCLA-02-2020-2038 (Order), to the five PRPs identified above, plus Jeffrey B. Laskin both individually and doing business as Advanced Demolition and Recycling. The Order directs the six Respondents to abate the significant remaining threats posed by friable asbestos at the Site. The Order became effective on October 14, 2020. Only TechCity, AG Properties, and Mr. Ginsberg (Performing Respondents) initially complied with the Order, but they completely stopped complying by May 2021.

The total EPA cost for this removal action, based on full-cost accounting practices that will be eligiblefor cost recovery, is estimated to be $22,111,221, and was calculated as follows:

COST CATEGORY	AMOUNT
Direct Extramural cost	$14,947,000
Direct Intramural Cost	$300,000
Subtotal Direct Costs	$15,247,000
Indirect costs (Indirect Regional Cost Rate 40.66%)	$6,864,221
Estimated EPA Costs eligible for Cost Recovery	$22,111,221

Note: Direct costs include direct extramural costs and direct intramural costs. Indirect costs are calculated based on an estimated indirect cost rate expressed as a percentage of site-specific direct costs, consistent with the full cost accounting methodology which became effective on October 2, 2000. These estimates do not include prejudgment interest, do not take into account other enforcement costs, including Department of Justice costs, and may be adjusted during the course of the removal action. The estimates are for illustrative purposes only and their use may not be relied upon by, or create any rights for, any third party. Neither the lack of a total cost estimate nor deviation of actual costs from this estimate will affect the United States' right to cost recovery.

X. RECOMMENDATION

This decision document represents the selected RV2 removal activities for the TechCity Site located in the Town of Ulster, Ulster County, New York. This document was developed in accordance with CERCLA and is not inconsistent with the NCP. This decision is based on the administrative record for the removal action.

Conditions at the Site meet the NCP Section 300.415(b) criteria for a removal action and the CERCLA Section 104(c)(1) emergency exemption from the 12-month and $2 million limitations. I recommend your approval of the proposed ceiling increase, as well as the emergency exemption. The current approved project ceiling for the Site is $500,000 of which $475,000 is for mitigation contracting. The total project ceiling increase requested is $14,447,000 of which $11,380,000 is for mitigation contracting, bringing the total project ceiling to $14,947,000, of which $12,305,000 is for mitigation contracting. There are currently sufficient monies in the current Advice of Allowance to fund this action.

Please indicate your formal authorization of the RV2 removal activities at the TechCity Site, as per current Delegation of Authority, by signing below.

APPROVAL: BARRY BREEN Digitally signed by BARRY BREEN Date: 2021.09.28 10:26:21 -04'00'

Barry N. Breen, Acting Assistant Administrator
Office of Land and Emergency Management

DISAPPROVAL: _____

Barry N. Breen, Acting Assistant Administrator
Office of Land and Emergency Management

cc: (after approval is obtained)
K. Salyer, OEM-D
W. Mugdan, ARA
P. Evangelista, SEMD-D
J. Prince, SEMD-DD
E. Wilson, SEMD-Enf DD
J. Rotola, SEMD-RAB
D. Harkay, SEMD-RAB
B. Grealish, SEMD-RAB
T. Lieber, ORC-NYCSFB
V. Capon, ORC-NYCSFB
M. Wieder, ORC-NYCSFB
M. Mears, PAD
A. Rajkowski-Reyes, OPM-GCMB
M. Fiore, OIG
B. Schlieger 5104A
J. Meachem, NYSDOL
J. Pensabene, NYSDOL
D. Lanners, NYSDEC
A. Raddant, USDOI
F. Csulak, NOAA
L. Battes, NYSEMO
S. Bates, NYSDOH
T. Benton, START

Attachment 1
RV1 Action Memorandum and Site Map

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

ACTION MEMORANDUM (RV1)

DATE: May 3, 2021

SUBJECT: Confirmation of Verbal Authorization for Emergency Removal Action, TechCity Superfund Site, Town of Ulster, Ulster County, New York

FROM: Don Graham, On-Scene Coordinator
Removal Action Branch
DONALD GRAHAM Digitally signed by DONALD GRAHAM Date: 2021.04.30 08:50:01 -04'00'

THRU: Joseph D. Rotola, Chief
Removal Action Branch
JOSEPH ROTOLA Digitally signed by JOSEPH ROTOLA Date: 2021.05.03 10:16:18 -04'00'

TO: Pat Evangelista, Director
Superfund and Emergency Management Division

Site ID: A27N

I. PURPOSE

The purpose of this Action Memorandum is to document the verbal authorization by Eric Wilson, the former Acting Division Director of the U.S. Environmental Protection Agency (EPA), Region 2, Superfund and Emergency Management Division (SEMD) to perform emergency removal activities (RV1) at the TechCity Superfund Site (Site) in the Town of Ulster, Ulster County, New York. The total funding verbally authorized on February 12, 2020, was $500,000 of which, $475,000 was for mitigation contracting.

The purpose of the removal activities was to address some of the most immediate threats posed by the Site by removing and disposing of Building 2 which was partially demolished and contained friable asbestos-containing material (ACM), and securing Building 1 and three large debris piles that also contain ACM, if necessary. The release or the threat of release of friable ACM necessitated the removal activities under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 U.S.C. §§ 9601-9675, and Section 300.415(b) of the National Contingency Plan (NCP), 40 CFR. § 300.415(b).

The Site is not included or proposed for inclusion on the National Priorities List (NPL).

As asbestos is the primary contaminant of concern, the activities qualified as nationally significant or precedent setting, which would require concurrence from EPA's Office of Emergency Management (OEM), Office of Land and Emergency Management (OLEM), in a non-emergency situation. However, due to the emergency conditions that were identified and the determination to immediately address the

release of friable asbestos at and from the Site, concurrence was not obtained. The emergency activities completed were necessary to prevent immediate threats posed by exposed asbestos which could have resulted in a direct public health threat.

II. SITE CONDITIONS AND BACKGROUND

The Site includes a 258-acre industrial complex constructed by the International Business Machines Corporation (IBM) in 1955 and operated by IBM for over 30 years. The Site was purchased from IBM by two related entities, AG Properties of Kingston, LLC (AG Properties) and Ulster Business Complex, LLC in February 1998. The Site is operated and managed by a third related entity, TechCity Properties, Inc. (TechCity). Various parcels of the facility have been transferred to related limited liability corporations and leased to various tenants since that time. Several Buildings were demolished by TechCity from 2015 through 2016.

When EPA first became involved in the Site in May 2017, EPA identified the following areas of concern: 1) the interior of Building 1, which is 270,000 square feet in size where an improper asbestos abatement had occurred; and 2) Building 2, the interior and exterior of which contained friable asbestos and had been partially demolished in 2016. In April 2018, the EPA was informed of a third area of concern; three large debris piles containing regulated asbestos containing material (RACM) which were generated during the demolition of Building 25. The entire Site, including the three areas of concern, is not fenced and is accessible to the tenants, visitors, and other persons entering the facility including visitors to adjacent soccer fields.

The Superfund and Emergency Management System identification number for the Site is NYD001359694. The removal action was considered an emergency.

A. Site Description

1. Removal Site Evaluation (RSE)

In May 2017, EPA was contacted by Ulster County officials requesting assistance in addressing potential public health and environmental threats associated with friable asbestos from Buildings 1, 2, and 34 at the Site. EPA's Removal Action Branch (RAB) and Ulster County officials inspected the Site on May 4, 2017 and observed a 40-foot-long trailer containing hundreds of bags of friable asbestos left behind by TechCity's asbestos abatement contractor, A2 Environmental Solutions, LLC (A2ES); Building 1, left with open and unsecured windows/doors and asbestos containment curtains in disrepair; and Building 2 left partially demolished with openings in the roof where friable asbestos pipe covering was visible from the outside. Also observed during the inspection were three large debris piles, between ten feet and 20 feet high, which had been generated from the demolition of Building 25.

Building 1 is an expansive one-story structure which had undergone an asbestos abatement by A2ES. On August 1, 2016, New York State Department of Labor (NYSDOL) inspected the asbestos abatement activities at Building 1 and observed several individuals conducting dry removal of ACM, which was causing visible asbestos emissions throughout the Building. Inspectors noted several violations and issued a stop work order to A2ES for violations of

New York State Industrial Code Rule 56 (12 NYCRR Part 56). NYSDOL determined that the entire interior of the structure was contaminated with asbestos due to the improper asbestos abatement activities.

Building 2 was a 1,000 square foot structure attached to Building 1. The Building was partially demolished by another contractor hired by TechCity in 2016. In November 2017, EPA collected ten samples of suspected ACM from the exposed walls and the partially demolished roof of Building 2. Of the ten samples collected from the Building, five samples were found to contain friable asbestos. Amosite asbestos was positively identified in four bulk samples at concentrations ranging from 3.06% to 57.10%, and chrysotile asbestos was positively identified in five bulk samples at concentrations up to 50% (see Attachment 1).

In December 2017, at the request of EPA and with the agency's oversight, a contractor for TechCity sprayed areas of concern on Building 2 with a temporary encapsulant to prevent the release of asbestos fibers. TechCity also removed non-friable asbestos vinyl flooring adjacent to former Building 34. EPA advised TechCity that the encapsulant actions were interim measures designed to protect public health and the environment until the asbestos concerns were permanently addressed.

In April 2018, NYSDOL notified EPA that it considered the three Building 25 debris piles to be friable RACM. These piles are situated approximately 200 feet south of Building 1 and are located on the slab of the former Building 25. Thereafter, under EPA oversight, TechCity covered the piles with tarps, installed hay bale barriers, and posted warning signs. The tarps lasted less than two months and had to be replaced by TechCity again in June 2018. Since that time, the tarps have had to be replaced or the piles recovered multiple times. The RACM piles are immediately adjacent to athletic fields that are used by, among others, a local children's soccer league.

Based on the presence of friable asbestos in Buildings 1 and 2, the Site was determined to pose an immediate public health threat to individuals frequenting the Site. These individuals include tenants, visitors, and persons who can frequent the Site which is unsecured and readily accessible to both pedestrians and vehicles.

2. Physical location

The Site is located at 300 Enterprise Drive in the Town of Ulster in Ulster County, New York, 12401 (41.9685955°N, -74.0082493°W). The Site includes a 258-acre industrial complex bordered by residential properties to the north and south, an active railway and commercial district to the east, and the Esopus Creek and adjoining woodlands to the west (see Figure 1). Youth soccer fields are located within the boundaries of the Site, less than 850 feet from the areas of concern described herein. The areas of concern include Building 1, Building 2 (now removed), and the three large RACM piles generated from the demolition of Building 25.

3. Site characteristics

The industrial complex at the Site was constructed by IBM in 1955 and was operated by IBM for over 30 years. The Site contains several Buildings and support structures. The Site was purchased from IBM by two related entities, AG Properties and Ulster Business Complex, LLC in February 1998. The Site is operated and managed by a third related entity, TechCity. Various parcels of the facility have been transferred to related limited liability corporations and leased to various tenants since that time. Although several of the Buildings had been tenant-occupied since 1998, many of the Buildings are currently vacant but a few are occupied by commercial tenants. When EPA first became involved in the Site in 2017, EPA identified the following areas of concern: 1) The interior of Building 1, which is 270,000 square feet in size where an improper asbestos abatement occurred; 2) Building 2, the interior and exterior of which contained friable asbestos and had been partially demolished in 2016. EPA was notified of a third area of concern in April 2018; three large debris piles containing RACM, which were generated during the demolition of Building 25. The entire Site, including the three areas of concern, is not fenced and is accessible to the tenants, visitors, and other persons entering the facility including the adjacent soccer fields.

This is the first Action Memorandum for removal activities (RV1) at the Site.

4. Release or threatened release into the environment of a hazardous substance, or pollutant, or contaminant

As indicated in Section II., A.1., sampling and analysis identified asbestos, a CERCLA hazardous substance, as defined in Section 101(14) of CERCLA, 42 U.S.C. § 9601(14) and listed in 40 CFR Table 302.4, as being present at the Site. The Site is a facility within the meaning of Section 101(9) of CERCLA, 42 U.S.C. § 9601(9), and the presence of asbestos as observed and documented at the Site constitutes a "release" or threat of release within the meaning of Section 101(22) of CERCLA, 42 U.S.C. § 9601(22).

Hazardous Substance	Statutory Source for Designation under CERCLA
Asbestos	Clean Water Act Section 307(a) Clean Air Act Section 112

The mechanism for the release or threat of release of friable asbestos into the environment includes dispersion or emission from the partially demolished Building 2. There is a risk of continued release of asbestos contamination from Building 1 and the RACM piles, which contain friable asbestos in an unsecured and/or deteriorated condition that was open to the environment and has not been permanently abated.

Conditions at the Site, including those related to Buildings 1 and 2, meet the requirements of Section 300.415(b) of the National Contingency Plan (NCP) for the undertaking of a CERCLA removal action.

5. NPL status

The Site is not listed on the NPL, nor is it proposed to be listed.

6. Maps, pictures, and other graphic representations

See Site Map, Figure 1, attached hereto.

B. Other Actions, to Date

1. Previous actions

Following EPA's initial inspection with Ulster County officials on May 4, 2017, EPA contacted the NYSDOL for guidance on interim actions that TechCity could undertake to ensure compliance with the applicable regulations for completion of the asbestos abatement activities at the Site. The resulting NYSDOL guidance and variances governed performance of the following asbestos abatement activities voluntarily performed by TechCity with EPA oversight:

- Removal and decontamination of storage trailers abandoned by A2ES outside of Building 1 and the disposal of the asbestos contained therein;
- Installation of critical barriers on Buildings 1 and 2;
- Application of an asbestos encapsulant spray on the demolished portion of Building 2; and
- The removal and off-Site disposal of asbestos containing tiles and mastic from the slab of Building 34.

These removal activities, which were designated by EPA as PJ1, were performed by TechCity pursuant to NYSDOL approved variances utilizing NYSDOL certified asbestos abatement contractors between June 16, 2017 and February 16, 2018.

In April 2018, NYSDOL notified EPA that it considered the (three) Building 25 debris piles to be friable RACM. Thereafter, under EPA oversight, TechCity covered the piles with tarps, installed hay bale barriers, and posted warning signs. Due to the inadequate size and composition of the tarps, the tarps soon failed. The damaged tarps were replaced on June 22, 2018 and again on September 24, 2018 prior to the completion of the response action on September 27, 2018. These removal activities were designated by EPA as PJ2.

2. Current actions

Between May 2017 and November 2019, EPA attempted to have TechCity voluntarily address the asbestos conditions concerning Buildings 1, 2, and 25 through permanent measures given that the temporary measures noted above were no longer effective. On December 11, 2019, EPA sent a letter to five parties, including TechCity, notifying them of their potential liability under CERCLA and requesting that they cooperate by consensually performing a CERCLA removal

action. EPA's letter asked that the PRPs notify EPA if they were willing to voluntarily finance and/or perform a CERCLA removal action to permanently address the release or threat of release of friable asbestos at Building 1, Building 2, and the three RACM piles from former Building 25 at the Site.

As none of the notified PRPs indicated a willingness to undertake all the work called for by EPA to permanently address the asbestos in the areas discussed above, EPA obtained the former Acting Division Director's verbal authorization for funding to commence a CERCLA emergency removal action on February 12, 2020. Removal activities authorized under the verbal authorization included:

- Replacing and/or repairing critical barriers on Building 1, as needed;
- Demolish Building 2 while segregating demolition debris to minimize the amount of asbestos and maximize the amount of recyclable materials to the extent practicable, and transporting the materials for off-Site disposal and recycling; and
- Installing weather resistant tarps on the RACM piles, as deemed necessary by EPA.

Acting upon the verbal authorization of funding, EPA initiated removal activities at the Site (RV1) on March 13, 2020. As of March 16, 2020, EPA was fully mobilized on-Site and initiated the demolition of Building 2 utilizing EPA's Emergency Response and Remediation Services (ERRS) contractor which performed all NYSDOL asbestos regulated activities under the oversight of a NYSDOL licensed 3rd Party Asbestos Consultant/Air Monitoring contractor. As of March 26, 2020, all activities relating to the demolition and off-Site disposal of Building 2 were completed, resulting in the off-Site disposal of 225 tons of RACM and the off-Site recycling of 150 tons of decontaminated steel.

Prior to demobilizing on March 26, 2020, ERRS also repaired critical barriers on Building 1, posted asbestos warning signs at all entry ways, and installed fencing along the eastern side of the Building to limit access to portions of the Building's exterior where physical hazards from loose masonry material was present.

The three large RACM piles are currently covered with tarps installed by TechCity's contractor, which is inspecting and maintaining them. On September 16, 2020, Region 2 issued Administrative Order for a Removal Action, Index No. CERCLA-02-2020-2038 (Order), which directs TechCity, AG Properties, Alan L. Ginsberg, A2ES, Stephanie Laskin, and Jeffrey B. Laskin to, among other things, remove the three large RACM piles as well as secure and/or permanently abate friable asbestos in Building 1 at the Site. The Order became effective on October 14, 2020. TechCity, AG Properties, and Mr. Ginsberg, President and CEO of TechCity, are complying with the Order and have been moving forward with the required work. EPA has been receiving weekly updates and pictures of the condition of the piles.

C. State and Local Authorities' Role

1. State and local actions, to date

NYSDOL continues to work in close coordination with EPA on all asbestos related issues at the Site.

Since requesting EPA's assistance in May 2017, Ulster County has worked in coordination with EPA and NYSDOL regarding TechCity's efforts to maintain the critical barriers on Building 1, which along with Building 2, Ulster County took title to in a tax foreclosure proceeding in March 2017. Ulster County's actions have included the replacement and upgrade of failed critical barriers installed on the loading dock bay doors on Building 1.

Ulster County and the Town of Ulster continue to work in close coordination with EPA on all asbestos-related removal activities at the Site.

2. Potential for continued State/local response

Other than NYSDOL's ongoing coordination with EPA on matters pertaining to asbestos present at the Site, there are no actions planned or being taken by the State or local government agencies to address the RACM piles or asbestos in Building 1.

III. THREAT TO PUBLIC HEALTH, OR WELFARE, OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

The threat to public health or welfare posed by the asbestos conditions of Buildings 1, 2, and the three RACM piles at former Building 25, as well as the threat of future releases of asbestos, a CERCLA hazardous substance, to the environment, has been well documented at the Site.

Asbestos is a hazardous substance as defined by Section 101(14) of CERCLA, 42 U.S.C. § 9601(14), and is listed in Table 302.4 of the NCP, 40 CFR § 302.4. Analytical data from samples collected by EPA from Building 2 in November 2017 identified Amosite asbestos at concentrations ranging from 3.06% to 57.10%, and Chrysotile asbestos at concentrations ranging up to 50%. Asbestos in these concentrations is considered a public health threat.

Asbestos mainly affects the lungs and the membrane that surrounds the lungs. Breathing high levels of asbestos fibers for a long time may result in scar-like tissue in the lungs and in the pleural membrane (lining) that surrounds the lung. This disease is called asbestosis and is usually found in workers exposed to asbestos. People with asbestosis have difficulty breathing, often a cough, and in severe cases heart enlargement. Asbestosis is a serious disease and can eventually lead to disability and death.

Breathing lower levels of asbestos may result in changes called plaques in the pleural membrane which is the thin layer of tissue that lines the pleural cavity, the space that surrounds the lungs and lies underneath the chest wall. Pleural plaques can occur in workers and sometimes in people living in areas with high environmental levels of asbestos. Effects on breathing from pleural plaques alone are not

usually serious, but higher exposure can lead to a thickening of the pleural membrane that may restrict breathing.

The conditions at the Site met the criteria for a CERCLA removal action as described in the NCP, 40 CFR 300.415(b)(2). The following criteria are directly applicable to the threats that existed and continue to exist at the Site:

Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances, or pollutants, or contaminants.

There was a threat to human health posed by the asbestos in Building 2 at the Site prior to its demolition. Building 1 and the three RACM piles continue to pose a threat. Since the Site is not secured, tenants, trespassers, visitors, soccer players, etc. were at risk. Any entry into Buildings 1 and 2 could disturb asbestos on the floor of those structure which could cause tracking of asbestos out of the Buildings and into public areas and/or released into the air.

Weather conditions that may cause hazardous substances, or pollutants, or contaminants to migrate or be released.

Friable asbestos was present in/on Building 2, which was partially demolished and open to the environment for over a year before EPA removed it. At Building 1 and in the RACM piles, the friable asbestos therein is subject to weathering, potentially releasing asbestos fibers into the environment. Once in the environment, the stable mineral fibers persist and do not break down further. Steady wind traveling across the Site will result in asbestos fibers to be entrained in the air resulting in the spread of asbestos fibers to the environment impacting areas frequented by the public.

The availability of other appropriate federal or State response mechanisms to respond to the release.

EPA was the only government agency capable of taking timely and appropriate action to respond to the threat posed by the presence of hazardous substances at the Site.

IV. ENDANGERMENT DETERMINATION

Actual or threatened releases of hazardous substances from the Site presented an imminent and substantial endangerment to public health, or welfare, or the environment.

V. ACTIONS PROPOSED OR TAKEN AND ESTIMATED COSTS

A. <u>Actions Proposed or Taken</u>

1. Action description

The funding request documented in this Action Memorandum was necessary to mitigate the threats posed by the asbestos contaminated materials identified herein. The activities approved and/or taken to address the public health threats were as follows:

- Replacing and/or repairing critical barriers on Building 1. Such activities were completed on March 26, 2020;

- Demolishing Building 2 and segregating the debris to minimize the amount of RACM and maximize the amount of recyclable materials, and off-Site disposal and recycling of those materials. Such activities were completed on March 26, 2020; and
- Installing new tarps on three RACM piles. Such actions have not been necessary due to TechCity's ongoing monitoring and maintenance of the tarps. EPA will conduct this work if TechCity fails to do so.

All off-Site disposal of hazardous waste and/or substances complied with the CERCLA Off-Site Rule, 40 CFR Section 300.440.

2. Contribution to remedial performance

The response actions documented in this Action Memorandum addressed the direct contact threat to the public from friable asbestos. The activities contributed effectively to any long-term response action with respect to the release or threat of release of hazardous substances at the Site.

3. Engineering Evaluation/Cost Analysis (EE/CA) (for non-time critical actions only)

Because of the time critical nature of this removal action, an EE/CA was not prepared.

4. Applicable or Relevant and Appropriate Requirements (ARARs)

ARARs within the scope of this project were or will be met to the extent practicable given the exigencies of the situation. ARARs for the removal activities at Buildings 1, 2, and the Building 25 debris piles include the Clean Air Act (CAA), the National Emissions Standards for Hazardous Air Pollutants (NESHAP), and the New York State Industrial Code Rule 56 (12 NYCRR Part 56).

5. Project schedule

On-Site mitigation activities including the securing of Building 1 and the demolition and off-Site disposal of Building 2 were initiated on March 13, 2020 and completed on March 26, 2020. EPA will monitor TechCity's actions related to the maintenance of the three RACM piles and will continue to do so until TechCity completes the scope of work pursuant to the Order.

B. Estimated and Expended Costs

The estimated and expended costs for RV1 is summarized below.

Extramural Costs	**Total Funding Authorized**	**Cost to Date**	**Funding Remaining**
Regional Removal Allowance Costs (Total cleanup contractor including labor, equipment and materials)	$475,000	$130,000	$345,000
Other Extramural Costs Not Funded by the Regional Allowance			
Total Removal Support Team (RST) Costs	$25,000	0	$25,000
Subtotal, Extramural Costs	$500,000	0	$370,000
Extramural Cost Contingency 20%	$0	0	0
TOTAL REMOVAL ACTION PROJECT CEILING	$500,000	$130,000	$370,000

VI. EXPECTED CHANGE IN THE SITATION SHOULD ACTION BE DELAYED OR NOT TAKEN

Had the removal activities relating to Buildings 1 and 2 been delayed or not taken, the ongoing release or threat of release of friable asbestos at these Buildings would have continued unabated, posing a threat to public health, or welfare, or the environment. The direct contact threat posed by asbestos, a hazardous substance, at the Site presented a significant threat to human health. If no actions were taken, tenants, visitors, and trespassers would continue to come into direct contact with asbestos.

VII. OUTSTANDING POLICY ISSUES

There are no known outstanding policy issues associated with the Site at the present time.

As per Delegation 14-2, a copy of this Action Memorandum will be provided to EPA's Office of Emergency Management (OEM), Office of Land and Emergency Management (OLEM) within two weeks of approval since this action was conducted as an emergency.

VIII. ENFORCEMENT

Between May 2017 and November of 2019, EPA attempted to have TechCity Properties voluntarily address the asbestos conditions concerning Buildings 1, 2, and former 25 through permanent measures given that the temporary measures noted above were no longer effective.

On December 11, 2019, EPA notified five parties of their potential liability under CERCLA and requested that they cooperate by consensually performing a CERCLA removal action to permanently address the release or threat or release of friable asbestos at Buildings 1, 2, and the three RACM piles

from former Building 25 at the Site. None of the notified Respondents indicated a willingness to undertake all the work called for by EPA.

As discussed above, on September 16, 2020, Region 2 issued a removal Order which directed the Respondents thereto to abate the significant remaining threats posed by friable asbestos at the Site, including removal of the three RACM piles as well as secure and/or permanently abate friable asbestos in Building 1 at the Site. The Order became effective on October 14, 2020. TechCity, AG Properties, and Mr. Ginsberg, are complying with the Order.

The total EPA cost for this removal action, based on full-cost accounting practices that will be eligible for cost recovery, is estimated to be $917,460, and was calculated as follows:

COST CATEGORY	**AMOUNT**
Direct Extramural cost	$500,000
Direct Intramural Cost	$100,000
Subtotal Direct Costs	$600,000
Indirect costs (Indirect Regional Cost Rate 52.91%)	$317,460
Estimated EPA Costs eligible for Cost Recovery	$917,460

This estimate includes direct costs, which include direct extramural costs and direct intramural costs. Indirect costs are calculated based on and estimated indirect cost rate expressed as a percentage of site-specific direct costs, consistent with full cost accounting methodology which became effective on October 2, 2000. These estimates do not include prejudgment interest, do not take into account other enforcement costs, including Department of Justice costs, and may be adjusted during the course of the removal action. The estimates are for illustrative purposes only and their use in this Action Memorandum may not be relied upon by any third party as binding upon EPA. Neither the lack of a total cost estimate nor deviation of actual costs from this estimate will affect the United States' right to cost recovery.

IX. RECOMMENDATION

This decision document represents the selected removal activities for the TechCity Site located in the Town of Ulster, Ulster County, New York. This document was developed in accordance with CERCLA, as amended, and is not inconsistent with the NCP. This decision is based on the Administrative Record.

Conditions at the Site met, and continue to meet, the NCP Section 300.415(b) criteria for a removal action, and I recommend your approval of the removal activities. The total funding requested was $500,000, of which $475,000 was from the regional removal advice of allowance for mitigation contracting. There were sufficient funds in the Advice of Allowance to fund this action.

Please indicate your formal authorization of the RV1 removal activities at the TechCity Site, as per current Delegation of Authority, by signing below.

APPROVAL: Evangelista, Pat Digitally signed by Evangelista, Pat Date: 2021.05.03 12:43:56 -04'00' **DATE:** _____

Pat Evangelista, Director
Superfund and Emergency Management Division

DISAPPROVAL: _____ **DATE:** _____

Pat Evangelista, Director
Emergency and Emergency Management Division

cc: (after approval is obtained)
J. Prince, SEMD-DD
E. Wilson, SEMD-DD
J. Rotola, SEMD-RAB
D. Harkay, SEMD-RAB
B. Grealish, SEMD-RAB
V. Capon, ORC-NYCSB
M. Wieder, ORC-NYCSB
M. Mears, PAD
A. Rajkowski-Reyes, OPM-GCMB
M. Fiore, OIG
B. Schlieger 5104A
J. Meachem, NYSDOL
J. Pensabene, NYSDOL
D. Lanners, NYSDEC
A. Raddant, USDOI
F. Csulak, NOAA
L. Battes, NYSEMO
S. Bates, NYSDOH
T. Benton, START

ATTACHMENT 1

Analytical Results Summary Table
Building 2 Asbestos Sampling
TechCity Site, Town of Ulster, Ulster County, NY

November 9, 2017

Weston Solutions, Inc.
Suite 201
1090 King Georges Post Road
Edison, New Jersey 08837-3703
732-585-4400 • Fax: 732-225-7037
www.westonsolutions.com

The Trusted Integrator for Sustainable Solutions

REMOVAL SUPPORT TEAM 3
EPA CONTRACT EP-S2-14-01

January 8, 2018

Mr. Don Graham, On-Scene Coordinator
U.S. Environmental Protection Agency, Region II
Removal Action Branch
2890 Woodbridge Avenue
Edison, New Jersey 08837

EPA CONTRACT No: EP-S2-14-01
TDD No: TO-0010-0042
DC No: RST3-04-D-0106
SUBJECT: REMOVAL ASSESSMENT SAMPLING REPORT, PHASE II
TECHCITY SITE,
TOWN OF ULSTER, ULSTER COUNTY, NEW YORK

Dear Mr. Graham,

Enclosed please find the Removal Assessment Sampling Report, Phase II for the bulk suspected asbestos-containing material (SACM) sampling event conducted by the U.S. Environmental Protection Agency (EPA) with the support of Weston Solutions, Inc., (RST 3) at the TechCity Site located in the Town of Ulster, Ulster County, New York on November 9, 2017.

If you have any questions or comments, please do not hesitate to contact me at (732) 570-4997.

Sincerely,

Weston Solutions, Inc.

Michael Mannino
RST 3 Site Project Manager

Enclosure
cc: TDD File: TO-0010-0042

REMOVAL ASSESSMENT SAMPLING REPORT

TECHCITY SITE

Town of Ulster, Ulster County, New York
SSID No: A27N

DC No: RST3-04-D-0106
TDD No: TO-0010-0042
EPA Contract No: EP-S2-14-01

Prepared for:

U.S. Environmental Protection Agency, Region II
2890 Woodbridge Avenue
Edison, New Jersey 08837

Prepared by:

Removal Support Team 3
Weston Solutions, Inc.
Federal East Division
Edison, New Jersey 08837

January 2018

TABLE OF CONTENTS

Page

1.0 Introduction……. 1

1.1 Site Location and Description…….. 1
1.2 Site History and Background……....1

2.0 Scope of Work……1

3.0 On-Site Personnel……2

4.0 Summary of Site Activities……... 2

5.0 Sampling Methodology…….. 2

6.0 Laboratory Receiving Samples…….. 3

7.0 Sample Collection and Dispatch……. 3

8.0 Analytical Results Summary……... 3

9.0 Conclusion……... 3

ATTACHMENTS

Attachment A: Figures

Figure 1: Site Location Map
Figure 2: Sample Location Map

Attachment B: Tables

Table 1: Sample Collection and Validated Analytical Results Summary Table - Asbestos

Attachment C: Photographic Documentation Log

Attachment D: Chain of Custody Record

Attachment E: Validated Data Package

1.0 Introduction

On November 9, 2017, the U.S. Environmental Protection Agency (EPA), Region II Removal Action Branch (RAB), with the support of Weston Solutions, Inc., Removal Support Team 3 (RST 3) conducted a Removal Assessment at the TechCity Site (the Site). Bulk samples of suspected asbestos-containing materials (SACM) were collected from a demolished on-site facility building. The bulk SACM samples were submitted for laboratory analysis in order to determine if any building materials contained asbestos.

1.1 Site Location and Description

The Site is located at 300 Enterprise Drive in the Town of Ulster, Ulster County, New York. It is comprised of a business park, and is situated in a mixed residential and commercial area. The Site is bordered by U.S. Highway 209 and residential and commercial properties to the north, residential properties to the south, commercial properties to the east, and a wooded area and Esopus Creek to the west.

Refer to Attachment A, Figure 1: Site Location Map.

1.2 Site History and Background

The business park was built in the 1950s by International Business Machines (IBM) and they operated it for more than 30 years until the property came under new ownership in 1998, and has remained under the same ownership since. The current property owner began building demolition, which included asbestos abatement activities. Mid-abatement, work was terminated due to unsafe work practices. The County of Ulster contacted EPA and requested that an investigation be conducted to determine if conditions at the Site posed a health risk to adjacent residences. On May 4, 2017, EPA and County health officials visited the Site to conduct visual inspections and document the conditions of the Site.

On May 23, 2017, EPA and RST 3 conducted a Removal Assessment at the Site. During the inspection of the on-site facility buildings, SACM was identified in various tiles, fibrous material, foam-like material, and mats within the demolished facility buildings. For ease of reference, the facility buildings were identified as Building 1, Former Building 2, Former Building 34, and Former Building 35. A total of eight bulk SACM samples were collected from the Site and analyzed by RST 3-procurred laboratory for asbestos via New York State (NYS) Environmental Laboratory Accreditation Program (ELAP) Polarized Light Microscopy (PLM) Methods 198.1 (if friable) and 198.6 (if non-friable); and via NYS Transmission Electron Microscopy (TEM) Method 198.4, if PLM result was less than (<) 0.1 percent (%). Analytical results positively identified asbestos in one SACM sample (a blue tile) collected from the location of Former Building 34. Analytical results indicated that the one SACM sample contained chrysotile asbestos at a concentration ranging from 5.0% to 5.6%.

2.0 Scope of Work

RST 3 was tasked by EPA with collecting bulk SACM samples from locations on-site within the partially demolished Former Building 2 for asbestos analysis via NYS ELAP PLM Methods 198.1

(if friable) and 198.6 (if non-friable); and via NYS TEM Method 198.4, if PLM result was < 0.1 %. In addition, RST 3 was tasked with providing support for photographic documentation and notation in the Site logbook of all site activities and entering sample information into the EPA Scribe database, an environmental data management system.

3.0 On-Site Personnel

Name	Affiliation	Duties On-site
Don Graham	EPA, Region II	On-Scene Coordinator
Bernard Nwosu	Weston Solutions, Inc., RST 3	Site Project Manager, Site H&S, Site QA/QC, Sample Collection and Sample Management

EPA: U.S. Environmental Protection Agency
QA/QC: Quality Assurance/Quality Control
RST 3: Removal Support Team 3
H&S: Health and Safety

4.0 Summary of Site Activities

On November 9, 2017, EPA and RST 3 performed a Removal Assessment sampling event at the Site. During the sampling event, bulk SACM samples were collected from various locations throughout Former Building 2. Prior to sample collection, the EPA On-Scene Coordinator (OSC) and RST 3 personnel conducted an inspection of Former Building 2 in order to select sample locations and determine potential hazards associated with collecting the SACM samples from the proposed sample locations within the partially demolished building structures. A sturdy A-frame ladder was utilized to access and collect the SACM samples from the selected locations which were approximately 12 feet above the ground. Sample collection was performed in Level C personal protective equipment (PPE). A total of 10 bulk SACM samples (P001-BULK009-01 through P001-BULK018-01) were collected from various building materials, including materials suspected to be insulation pipe, deteriorated drywall, furnace wrap, pipe wrap, and floor insulation. All the bulk SACM samples and the sample locations were documented with digital photographs. On November 10, 2017, RST 3 submitted all the SACM samples to an RST 3-procurred laboratory for analysis.

Refer to Attachment A, Figure 2: Sample Location Map and Attachment C: Photographic Documentation Log

5.0 Sampling Methodology

All on-site field work and sampling activities were performed in accordance with the RST 3 site-specific Health and Safety Plan (HASP), site-specific Uniform Federal Policy (UFP) Quality Assurance Project Plan (QAPP), and EPA's Region II Emergency Response Team (ERT)/Scientific, Engineering, Response & Analytical Services (SERAS) contractor's Standard Operation Procedure (SOP) Number (No.) 2001: *General Field Sampling Guidelines* and EPA Region IV Science and Ecosystem Support Division (SESD) SOP No. SESDGUID-104-R1: *Bulk Sampling for Asbestos*.

Bulk samples were collected from SACM that was identified during the inspection of the Former Building 2. The SACM was wetted prior to extraction with a safety knife and/or an extendable

grabber tool. The extracted SACM was placed into a resealable polyethylene bag which was then placed into a second resealable polyethylene bag. New nitrile gloves were donned prior to collecting each bulk SACM sample. A total of 10 bulk SACM samples were collected. All sample information was transcribed into EPA's Scribe database from which sample labels and Chain of Custody (COC) record were generated. The sample labels were affixed to each sample bag and then stored in a transport cooler.

6.0 Laboratory Receiving Samples

Laboratory Name/Location	Sample Matrix	Analyses
EMSL Analytical, Inc. 200 Route 130 North Cinnaminson, New Jersey 08077 (RST 3-procured Laboratory)	Bulk SACM	NYS ELAP PLM Methods 198.1 and 198.6; and NYS ELAP Method 198.4 via TEM, if PLM result is <0.1%.

NYS: New York State
PLM: Polarized Light Microscopy
< : Less than
ELAP: Environmental Laboratory Accreditation Program
TEM: Transmission Electron Microscopy
% : Percent

7.0 Sample Collection and Dispatch

On November 9, 2017, RST 3 collected a total of 10 bulk SACM samples from the Site. On November 10, 2017, RST 3 hand-delivered all 10 bulk SACM samples under COC record No. 2-110917-0010-0042-0002 to a courier from EMSL Analytical, Inc. Laboratory (EMSL) located in Cinnaminson, New Jersey for asbestos analysis via NYS ELAP PLM Methods 198.1 (if friable) and 198.6 (if non-friable); and via NYS TEM Method 198.4, if PLM result was < 0.1 %.

Refer to Attachment B, Table 1: Sample Collection and Validated Analytical Results Summary Table - Asbestos and Attachment D: Chain of Custody Record.

8.0 Analytical Results Summary

Based on the validated analytical results, asbestos was detected in five of the 10 bulk SACM samples collected during the Removal Assessment sampling event. Amosite asbestos was positively identified in four bulk SACM samples at concentrations ranging from 3.06% to 57.10%. Chrysotile asbestos was positively identified in five bulk SACM samples at concentrations ranging from <1% to 50%. Two of the bulk SACM samples (P001-BULK013-01 and P001-BULK014-01) each contained two layers of different compositions. The two different layers of each of these bulk SACM samples were separately analyzed by the laboratory. Both layers of P001-BULK013-01 contained asbestos. One layer of P001-BULK014-01 contained asbestos.

Refer to Attachment A, Figure 2: Sample Location Map and Attachment B, Table 1: Sample Collection and Validated Analytical Results Summary Table – Asbestos, and Attachment E: Validated Data Package.

9.0 Conclusion

Analytical results indicated that asbestos was positively identified in 50% of the samples collected from Former Building 2. Since asbestos is a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) hazardous substance, EPA may consider immediate

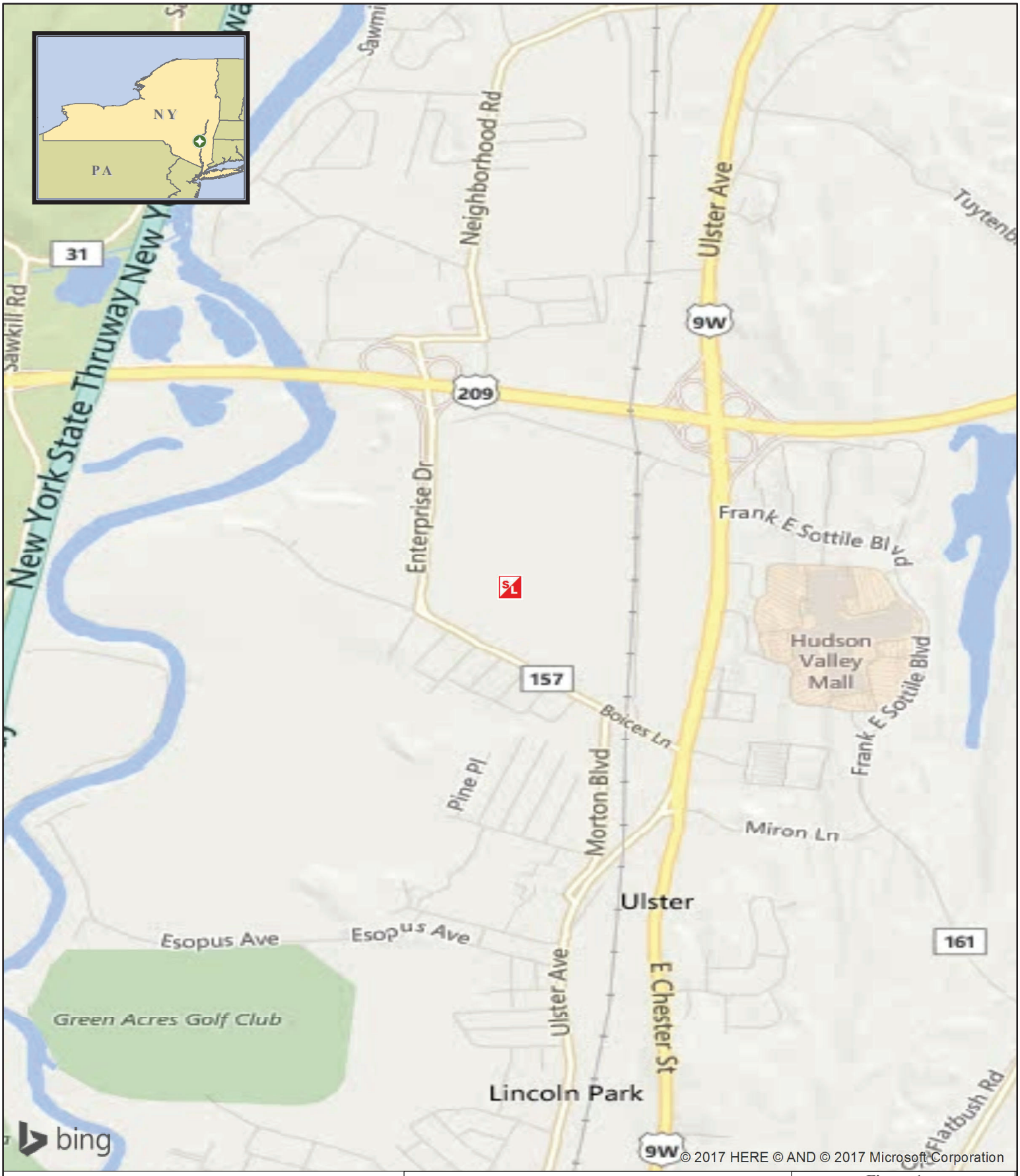
remedial options that would temporarily prevent the asbestos-containing materials (ACM) on-site from becoming airborne in order to prevent potential impact to human health, the immediate environment, and the surrounding community. In addition, EPA may consider a Removal Action in the future to completely eliminate the hazard posed to human health and the potential impact on the environment due to the presence of ACM at the Site.

Report prepared by: Michael Mannino — 1/8/2018
Michael Mannino — Date
RST 3 Site Project Manager

Report reviewed by: Bernard Nwosu — 1/8/2018
Bernard Nwosu — Date
RST 3 Group Leader

ATTACHMENT A

Figure 1: Site Location Map
Figure 2: Sample Location Map



Legend

Site Location

N

0 0.1 0.2 0.4 0.6 0.8 Miles

Weston Solutions, Inc.
East Division

In Association With
Scientific and Environmental Associates, Inc.,
Environmental Compliance Consultants, Inc.,
Avatar Environmental, LLC, On-Site Environmental,
Inc.and Sovereign Consulting, Inc

Figure 1:
Site Location Map

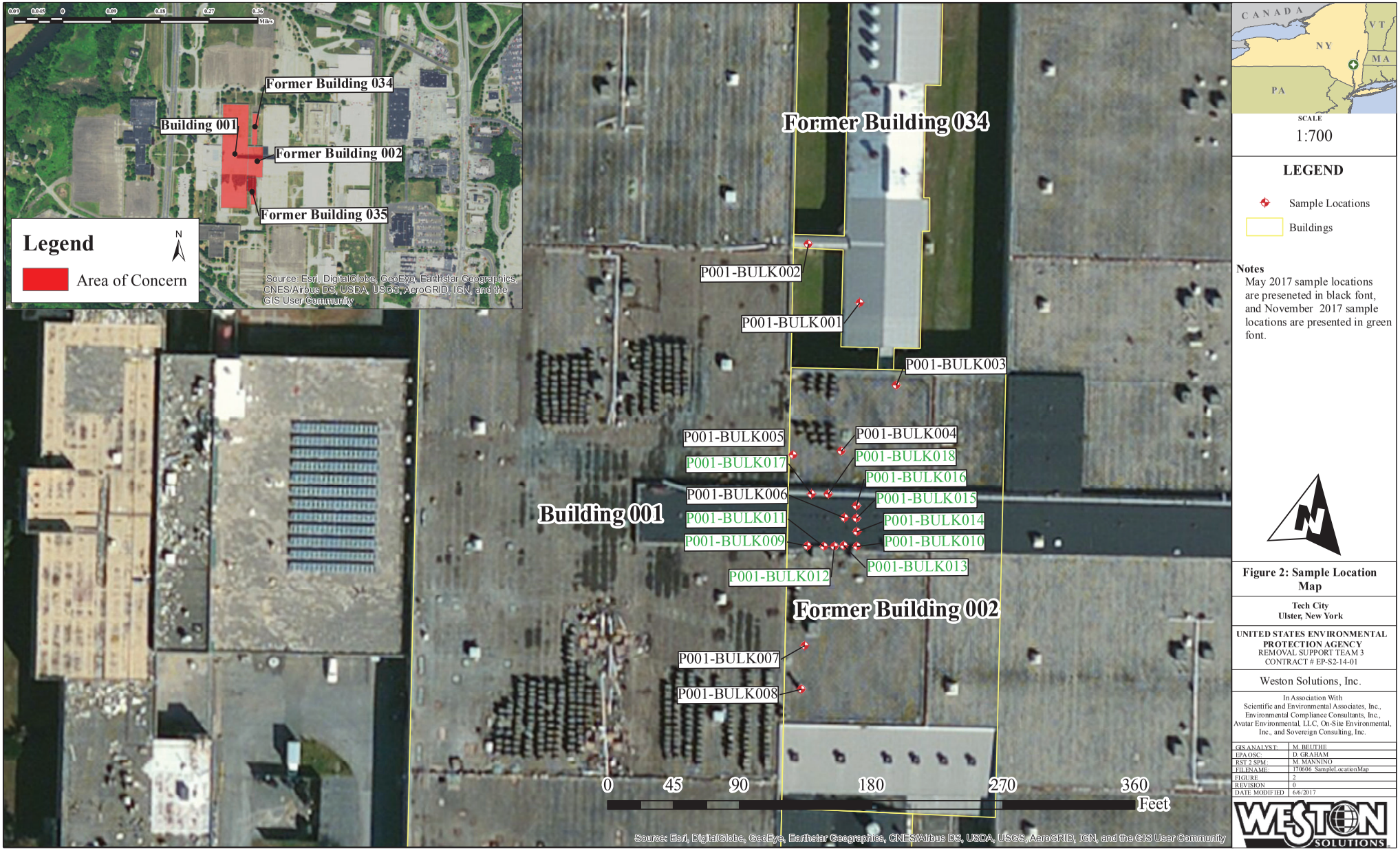
Tech City Site
Town of Ulster, New York

U.S. ENVIRONMENTAL PROTECTION AGENCY
REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DATE MODIFIED: 5/19/2017

GIS ANALYST:	M. MANNINO
EPA OSC:	D. GRAHAM
RST SPM:	M. MANNINO
FILENAME:	170519_SITELOCATIONMAP.MXD

\\FSED2DATA1\GISDATA\RST_3\00070194\MXD\170519_SITELOCATIONMAP.MXD



SCALE

1:700

LEGEND

- Sample Locations
- Buildings

Notes

May 2017 sample locations are preseneted in black font, and November 2017 sample locations are presented in green font.

Figure 2: Sample Location Map

Tech City
Ulster, New York

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

Weston Solutions, Inc.

In Association With
Scientific and Environmental Associates, Inc., Environmental Compliance Consultants, Inc., Avatar Environmental, LLC, On-Site Environmental, Inc., and Sovereign Consulting, Inc.

GIS ANALYST:	M. BEUTHE
EPA OSC:	D. GRAHAM
RST 2 SPM:	M. MANNINO
FILENAME:	170606_SampleLocationMap
FIGURE	2
REVISION	0
DATE MODIFIED	6/6/2017

WESTON SOLUTIONS

ATTACHMENT B

Table 1: Sample Collection and Validated Analytical Results Summary Table - Asbestos

Table 1: Sample Collection and Validated Analytical Results Summary Table - Asbestos
TechCity Site
Town of Ulster, Ulster County, New York
November 9, 2017

Sample Location No.	Location Description	RST 3 Sample No.	Color	Non-Asbestos		Asbestos		
				Fibrous	Non-Fibrous	PLM NYS 198.1 (Friable)	PLM NYS 198.6 (NOB)	TEM NYS 198.4 (NOB)
P001-BULK009	Second floor, suspected to be pipe insulation	**P001-BULK009-01**	Gray/White	**98% Glass**	**2% other**	**ND**	Not Analyzed	Not Analyzed
P001-BULK010	First floor, base of wall, suspected to be detoriorated drywall	**P001-BULK010-01**	Brown/White	**8.00% Cellulose 20.00% Glass**	**72.00% other**	**ND**	Not Analyzed	Not Analyzed
P001-BULK011	Second floor, suspected to be pipe insulation	**P001-BULK011-01**	White	NS	**55.60% other**	**33.30% Amosite 11.10% Chrysotile 44.40% Total**	Not Analyzed	Not Analyzed
P001-BULK012	Second floor, suspected to be pipe insulation	**P001-BULK012-01**	Gray/White	**11.8% Min. Wool**	NS	Not Analyzed	Inconclusive: Non-detect	**ND**
P001-BULK013	Second floor, suspected to be insullation with tar	**P001-BULK013-01**	Brown	**70.00% Cellulose 15.00% Glass**	**10.92% other**	**3.06% Amosite 1.02% Chrysotile 4.08% Total**	Not Analyzed	Not Analyzed
			Black	NS	NS	Not Analyzed	**Inconclusive : <1%Amosite Inconclusive : <1%Chrysotile Inconclusive - <1% Total**	**<1%Amosite <1%Chrysotile <1% Total**
P001-BULK014	Second floor, suspected to be insulation and pipe wrap	**P001-BULK014-01**	Gray/White	NS	**50.00% other**	**50.00% Chrysotile**	Not Analyzed	Not Analyzed
			White	**98.00% Cellulose**	**2.00% other**	**ND**	Not Analyzed	Not Analyzed
P001-BULK015	Second floor, suspected to be degraded insulation	**P001-BULK015-01**	Brown/Gray	**80.00% Cellulose**	**14.44% other**	**4.17% Amosite 1.39% Chrysotile 5.56% Total**	Not Analyzed	Not Analyzed
P001-BULK016	Second floor, suspected to be furnace wrap	**P001-BULK016-01**	Gray/White	**90.00% Glass**	**10.00% other**	Non-detect	Not Analyzed	Not Analyzed
P001-BULK017	Second floor, near roof line, suspected to be pipe insulation	**P001-BULK017-01**	White	NS	**42.90% other**	**57.10% Amosite <1% Chrysotile 57.10% Total**	Not Analyzed	Not Analyzed
P001-BULK018	Second floor, suspected to be interior pipe wrap	**P001-BULK018-01**	White/Silver/ Yellow	**27.6% Min. Wool**	NS	Not Analyzed	Inconclusive: Non-detect	**ND**

Notes:
RST 3 - Removal Support Team 3
No. - Number
% - Percent
< - Less than
ND - Non-detect
NS - Not Specified
PLM - Polarized Light Microscopy
NYS - New York State
TEM - Transmission Electron Microscopy
NOB - Non Friable Organically Bound
VCM - Vermiculite Containing Material
Asbestos-Containing Material

ATTACHMENT C

Photographic Documentation Log

Photographic Documentation Log
TechCity Site
Town of Ulster, Ulster County, New York
November 9, 2017

Photograph 1: View of the partially demolished Building 2 at the TechCity Site (the Site). The U.S. Environmental Protection Agency (EPA) and Weston Solutions, Inc., Removal Support Team 3 (RST 3) performed Removal Assessment sampling of suspected asbestos-containing material (SACM) in Building 2.

Photograph 2: A total of 10 bulk SACM samples were collected for laboratory analysis from building materials located throughout the demolished structure of Building 2 in order to determine if the building materials contained asbestos.

Photograph 3: View of sample location P001-BULK009 from which sample P001-BULK009-01 was collected.

Photograph 4: Close up view of P001-BULK009-01. The bulk SACM sample is suspected to be pipe insulation.

Photograph 5: View of sample location P001-BULK010 from which P001-BULK010-01 was collected.

Photograph 6: Close up view of P001-BULK010-01. The bulk SACM sample is suspected to be deteriorated drywall.

Photograph 7: View of sample location P001-BULK011 from which P001-BULK011-01 was collected.

Photograph 8: Close up view of P001-BULK011-01. The bulk SACM sample is suspected to be pipe insulation.

Photograph 9: View of sample location P001-BULK012 from which P001-BULK012-01 was collected.

Photograph 10: Close up view of P001-BULK012-01. The bulk SACM sample is suspected to be pipe insulation.

Photograph 11: View of sample location P001-BULK013 from which P001-BULK013-01 was collected.

Photograph 12: Close up view of P001-BULK013-01. The bulk SACM sample is suspected to be a type of insulation coated with tar.

Photograph 13: View of sample location P001-BULK014 from which P001-BULK014-01 was collected. The bulk SACM sample is suspected to be insulation and pipe wrap.

Photograph 14: View of sample location P001-BULK015 from which P001-BULK015-01 was collected.

Photograph 15: Close up view of P001-BULK015-01. The bulk SACM sample is suspected to be degraded insulation.

Photograph 16: View of sample location P001-BULK016 from which P001-BULK016-01 was collected. The bulk SACM sample is suspected to be furnace wrap.

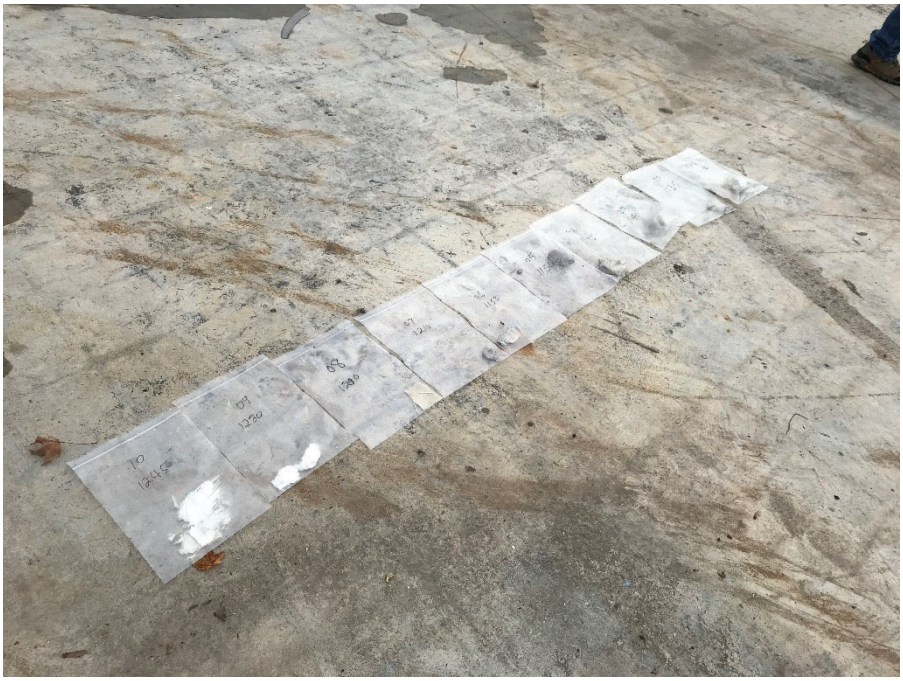
Photograph 17: View of sample location P001-BULK017 from which P001-BULK017-01 was collected. The bulk SACM sample is suspected to be pipe insulation.

Photograph 18: View of sample location P001-BULK018 from which P001-BULK018-01 was collected. The bulk SACM sample is suspected to be interior pipe wrap.

Photograph 19: View of some bulk SACM samples which were collected during the Removal Assessment sampling event and identified in the field as samples 01 through 05, but later renamed to correspond with P001-BULK009-01 through P001-BULK013-01, respectively.

Photograph 20: View of some bulk SACM samples which were collected during the Removal Assessment sampling event and identified in the field as samples 04 through 08, but later renamed to correspond with P001-BULK012-01 through P001-BULK016-01, respectively.

Photograph 21: View of some bulk SACM samples which were collected during the Removal Assessment sampling event and identified in the field as samples 07 through 10, but later renamed to correspond with P001-BULK015-01 through P001-BULK018-01, respectively.



Photograph 22: View of all 10 bulk SACM samples collected during the Removal Assessment sampling event and identified in the field as samples 01 through 10, but later renamed to correspond with P001-BULK009-01 through P001-BULK018-01, respectively.

ATTACHMENT D

Chain of Custody Record

USEPA
DateShipped: 11/10/2017
CarrierName: Hand Delivered
AirbillNo: NA

CHAIN OF CUSTODY RECORD
RFP Site #: 472
Contact Name: Michael Mannino
Contact Phone: 732-570-4997

No: 2-110917-0010-0042-0002
Lab: EMSL Analytical, Inc.
Lab Address: 200 Route 130 North
Lab Phone: 856-858-4800 x2304

Lab #	Sample #	Location	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analyses	Preservative	Lab QC
	P001-BULK009-01	BULK009	Asbestos	11/9/2017	11:30	1	Poly Bag	Asbestos PLM/TEM	None	N
	P001-BULK010-01	BULK010	Asbestos	11/9/2017	11:35	1	Poly Bag	Asbestos PLM/TEM	None	N
	P001-BULK011-01	BULK011	Asbestos	11/9/2017	11:40	1	Poly Bag	Asbestos PLM/TEM	None	N
	P001-BULK012-01	BULK012	Asbestos	11/9/2017	11:45	1	Poly Bag	Asbestos PLM/TEM	None	N
	P001-BULK013-01	BULK013	Asbestos	11/9/2017	11:50	1	Poly Bag	Asbestos PLM/TEM	None	N
	P001-BULK014-01	BULK014	Asbestos	11/9/2017	11:55	1	Poly Bag	Asbestos PLM/TEM	None	N
	P001-BULK015-01	BULK015	Asbestos	11/9/2017	12:10	1	Poly Bag	Asbestos PLM/TEM	None	N
	P001-BULK016-01	BULK016	Asbestos	11/9/2017	12:20	1	Poly Bag	Asbestos PLM/TEM	None	N
	P001-BULK017-01	BULK017	Asbestos	11/9/2017	12:30	1	Poly Bag	Asbestos PLM/TEM	None	N
	P001-BULK018-01	BULK018	Asbestos	11/9/2017	12:45	1	Poly Bag	Asbestos PLM/TEM	None	N

Special Instructions: Samples will be analyzed via NYS ELAP PLM Methods 198.1 (friable) and 198.6 (non-friable) and via NYS TEM Method 198.4, if PLM result is <0.1%. TAT: 1 week prelimiary/2 weeks validated. Please send analytical results to S.Sumbaly@WestonSolutions.com, Mike.Mannino@WestonSolutions.com, ben.nwosu@westonsolutions.com

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	Bernard Chan (Weston)	11/10/17 1421		11-10-17, 14:21	

ATTACHMENT E

Validated Data Package

Weston Solutions, Inc.
Suite 201
1090 King Georges Post Road
Edison, New Jersey 08837-3703
732-585-4400 • Fax: 732-225-7037
www.westonsolutions.com

The Trusted Integrator for Sustainable Solutions

REMOVAL SUPPORT TEAM 3
EPA CONTRACT EP-S2-14-01

RST 3-04-F-0064

TRANSMITTAL MEMO

To:	Mr. Donald Graham, On-Scene Coordinator Removal Action Branch U.S. EPA, Region II
From:	Smita Sumbaly, Data Reviewer RST 3, Region II
Subject:	TechCity Site Data Validation Assessment
Date:	December 21, 2017

The purpose of this memo is to transmit the following information:

- Data validation results for the following parameters:

Asbestos PLM	7 Samples
Asbestos PLM/TEM	3 Samples

- Matrices and Number of Samples

Bulk	10 Samples

- Sampling Date: November 9, 2017

The final data assessment narrative and original analytical data package are attached.

cc:	RST 3 SPM:	Michael Mannino
	RST 3 SITE FILE TDD #:	TO-0010-0042
	RST 3 ANALYTICAL TDD #:	TO-0010-0120
	TASK#:	4120

U.S. ENVIRONMENTAL PROTECTION AGENCY

MEMORANDUM

DATE: **December 21, 2017**

TO: **Donald Graham, On-Scene Coordinator**
U.S. EPA, Region II

FROM: **Smita Sumbaly**
RST 3 Data Review Team

SUBJECT: **QA/QC Compliance Review Summary**

As requested quality control and performance measures for the data packages noted have been examined and compared to EPA standards for compliance. Measures for the following general areas were evaluated as applicable:

Data Completeness
Sample Collection, Holding Times, and Preservation
Blank Analysis
Sample Sensitivity
Monthly Report PLM/TEM Calibrations

Any statistical measures used to support the following conclusions are attached so that the review may be reviewed by others.

Summary of Results

	Asbestos PLM	Asbestos TEM
Acceptable as Submitted	X	X
Acceptable with Comments		
Unacceptable, Action Pending		
Unacceptable		

Data Reviewed by: Smita Sumbaly Date: 12/21/2017

Approved By: Date: 12/21/17

Area Code/Phone No.: (732) 585-4410

NARRATIVE

Task No. 4120

SITE NAME: **TechCity Site**
300 Enterprise Drive,
Ulster, Ulster County, New York

Laboratory Name: EMSL Analytical, Inc., 200 Route 130 North, Cinnaminson, NJ 08077.

INTRODUCTION:

The laboratory's portion of this case consisted of 10 bulk presumed asbestos-containing material (PACM) samples. All samples were collected on November 9, 2017. The EMSL Order ID number is 041732699.

The laboratory reported No problem(s) with the receipt of these samples.

The laboratory reported No problems with the analyses of Asbestos PLM or TEM samples.

The evaluator has commented on the criteria specified under each fraction heading. All criteria have been assessed, but no discussion is given where the evaluator has determined that criteria were adequately performed or require no comment. Details relevant to these comments are given on the following forms.

Appropriate Form Is and Chain of Custody have been copied from the original data package and appended to the data assessment narrative for reference.

Title: Evaluation of Asbestos Data
Data Assessment Narrative

RFP #: 472/Task#: 4120 **Site: TechCity Site**

Contractor: WESTON-RST 3 **Reviewer: SMITA SUMBALY**

Matrix/No. of Samples: Bulk-10

A.2.1 Validation Flags- The following flags have been applied in red by the data validator and must be considered by the data user.

J- This flag indicates the result qualified as estimated.

Red- Line- A red-line drawn through a sample result indicates an unusable value. The red-lined data are known to contain significant errors based on documented information and must not be used by the data user.

Fully Usable Data- The results that do not carry "J" or "red-line" are fully usable.

A.2.2 The data assessment is given below and on the attached sheets.

On November 9, 2017, U.S. EPA Region II, RST 3 personnel collected 10 bulk PACM samples from the TechCity Site, located at 300 Enterprise Drive in the Town of Ulster, Ulster County, New York. On November 10, 2017, all the samples were picked by courier services from EMSL Analytical, Inc., 200 Route 130 North, Cinnaminson, New Jersey. The laboratory verified that the samples were received intact and properly custody sealed.

Out of the 10 bulk samples, two samples contained two layers, therefore a total of 12 samples were analyzed for asbestos.

Out of the 12 samples, nine friable bulk PACM samples were analyzed by Polarized Light Microscopy (PLM) using the procedures from the PLM NYS ELAP 198.1 Method. Suspected asbestos fibers were identified using the dispersion staining and the samples were quantified using visual estimation. Data was reported as percent asbestos. The quantification limit for the method is <1.0% (visual estimation/stratified count).

Out of the 12 samples, three non-friable bulk PACM samples were analyzed by PLM using gravimetric reduction procedures from the PLM NYS ELAP 198.6 Method. Data was reported as percent asbestos. The quantification limit for the method is <1.0% (visual estimation/stratified count).

As per NYS ELAP 198.6 Method, any sample found to be <1.0% or Inconclusive were then analyzed by Transmission Electron Microscopy (TEM) using the procedure from TEM NYS ELAP Method 198.4. The quantification limit for the method is <0.25% (visual estimation calculated with percent residue).

Client identification (ID) and laboratory ID numbers are as follows:

Client ID No.	Laboratory ID No.	Matrix	Sampling Date	Analysis
P001-BULK009-01	041732699-0001	Bulk	11/09/2017	Asbestos PLM
P001-BULK010-01	041732699-0002	Bulk	11/09/2017	Asbestos PLM
P001-BULK011-01	041732699-0003	Bulk	11/09/2017	Asbestos PLM
P001-BULK012-01	041732699-0004	Bulk	11/09/2017	Asbestos PLM & TEM
P001-BULK013-01-Insulation	041732699-0005	Bulk	11/09/2017	Asbestos PLM
P001-BULK013-01-Tar	041732699-0005A	Bulk	11/09/2017	Asbestos PLM & TEM
P001-BULK014-01-Insulation	041732699-0006	Bulk	11/09/2017	Asbestos PLM
P001-BULK014-01-Wrap	041732699-0006A	Bulk	11/09/2017	Asbestos PLM
P001-BULK015-01	041732699-0007	Bulk	11/09/2017	Asbestos PLM
P001-BULK016-01	041732699-0008	Bulk	11/09/2017	Asbestos PLM
P001-BULK017-01	041732699-0009	Bulk	11/09/2017	Asbestos PLM
P001-BULK018-01	041732699-0010	Bulk	11/09/2017	Asbestos PLM & TEM

Asbestos PLM analysis of Bulk by NY State ELAP 198.1:

Out of the 12 bulk samples, nine friable bulk samples were analyzed by PLM using the procedures from the PLM NYS ELAP 198.1 Method. All PLM data was reported on a percent asbestos basis. Out of nine sample, four samples were reported as none detected; four samples were reported between 3.06% to 57.10% Amosite asbestos and five samples were reported between <1.0% to 50.00% Chrysotile asbestos.

Asbestos PLM analysis of Bulk by NY State ELAP 198.6:

Out of the 12 bulk samples, three non-friable bulk samples were analyzed by PLM using the procedures from the PLM NYS ELAP 198.6 Method. All PLM data was reported on a percent asbestos basis. Out of the three samples, one sample was reported as Inconclusive: <1% Amosite asbestos and <1% Chrysotile asbestos; and two samples were reported as Inconclusive: none detected.

Method 198.6 PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Quantitative TEM is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos containing. **Samples with inconclusive results must not be interpreted as being non-ACM.**

Title: Evaluation of Asbestos Data
Data Assessment Narrative

Asbestos TEM analysis of Bulk by NY State ELAP 198.4:

Out of three samples, two non-friable bulk samples were reported as inconclusive: none detected and one sample was reported as <1% Amosite asbestos and <1% Chrysotile asbestos. Laboratory performed the confirmation analysis on all samples by TEM using the procedures from the TEM NYS ELAP 198.4 Method. All TEM data was reported on a percent asbestos basis.

QC Analysis

For QC purposes, the laboratory analyzed one inter-analyst QC via PLM NYS ELAP 198.6, one intra-analyst QC analysis via TEM NYS ELAP 198.4, and one lab blank via PLM NYS ELAP 198.6 and TEM NYS ELAP 198.4. All QC results are acceptable. The laboratory also submitted PLM calibration and contamination record, Monthly report for TEM calibrations, and Daily TEM calibration sheet.

A.2.3 Contract Problem/Non-Compliance:

None

Contractor Reviewer: _____ Signature: 12/21/2017 Date:

Verified by: _____ Signature: 12/21/2017 Date:

ASBESTOS DATA FOR BULK

Project: TechCity Site
Sampling Date: November 9, 2017

PLM NYS Method 198.1 - Friable, PLM NYS Method 198.6 NOB, and TEM NYS Method 198.4 NOB							
Client Sample ID Number	Laboratory Sample ID Number	Color	Non-Asbestos		Asbestos PLM NYS 198.1 Friable	Asbestos PLM NYS 198.6 NOB	Asbestos TEM NYS 198.4 NOB
			Fibrous	Non-Fibrous			
P001-BULK009-01	041732699-0001	Gray/White/ Yellow	98.00% Glass	2.00% Non-fibrous (other)	**None Detected**	Not Analyzed	Not Analyzed
P001-BULK010-01	041732699-0002	Brown/White	8.00% Cellulose 20.00% Glass	72.00% Non-fibrous (other)	**None Detected**	Not Analyzed	Not Analyzed
P001-BULK011-01	041732699-0003	White	-	55.60% Non-fibrous (other)	**33.30% Amosite 11.10% Chrysotile 44.40% Total**	Not Analyzed	Not Analyzed
P001-BULK012-01	041732699-0004	Gray/White	11.8% Min. Wool	10.92% Non-fibrous (other)	Not Analyzed	**Inconclusive: None Detected**	**None Detected**
P001-BULK013-01-Insulation	041732699-0005	Brown	70.00% Cellulose 15.00% Glass	-	**3.06% Amosite 1.02% Chrysotile 4.08% Total**	Not Analyzed	Not Analyzed
P001-BULK013-01-Tar	041732699-0005A	Black	-	-	Not Analyzed	**Inconclusive: <1% Amosite Inconclusive: <1% Chrysotile Inconclusive: <1% Total**	**<1% Amosite <1% Chrysotile <1% Total**
P001-BULK014-01-Insulation	041732699-0006	Gray/White	-	50.00% Non-fibrous (other)	**50.00% Chrysotile**	Not Analyzed	Not Analyzed
P001-BULK014-01-Wrap	041732699-0006A	White	98.00% Cellulose	2.00% Non-fibrous (other)	**None Detected**	Not Analyzed	Not Analyzed
P001-BULK015-01	041732699-0007	Brown/Gray	80.00% Cellulose	14.44% Non-fibrous (other)	**4.17% Amosite 1.39% Chrysotile 5.56% Total**	Not Analyzed	Not Analyzed
P001-BULK016-01	041732699-0008	Gray/White	90.00% Glass	10.00% Non-fibrous (other)	**None Detected**	Not Analyzed	Not Analyzed

ASBESTOS DATA FOR BULK

Project: TechCity Site
Sampling Date: November 9, 2017

PLM NYS Method 198.1 - Friable, PLM NYS Method 198.6 NOB, and TEM NYS Method 198.4 NOB							
Client Sample ID Number	Laboratory Sample ID Number	Color	Non-Asbestos		Asbestos PLM NYS 198.1 Friable	Asbestos PLM NYS 198.6 NOB	Asbestos TEM NYS 198.4 NOB
			Fibrous	Non-Fibrous			
P001-BULK017-01	041732699-0009	White	-	42.90% Non-fibrous (other)	**57.10% Amosite <1% Chrysotile 57.10% Total**	Not Analyzed	Not Analyzed
P001-BULK018-01	041732699-0010	White/Silver/ Yellow	27.6% Min. Wool	-	Not Analyzed	**Inconclusive: None Detected**	**None Detected**

NOB - non –friable organically bound

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (800) 220-3675
FAX: (856) 858-4960

November 30, 2017

Smita Sumbaly
Weston Solutions, Inc.
1090 King Georges Post Road, Suite 201
Edison, NJ 08837
732-585-4400
s.sumbaly@westonsolutions.com

Re: PLM NYS ELAP 198.1, PLM NYS ELAP 198.6, and TEM NYS ELAP 198.4; EMSL Order: 041732699; RFP #472

Dear Smita:

On November 10, 2017, EMSL Analytical, Inc. in Cinnaminson, NJ received ten (10) bulk samples for asbestos content analysis via PLM NYS ELAP 198.1 or PLM NYS ELAP 198.6 with conditional TEM NYS ELAP 198.4 analysis. The samples were received via FedEx and were logged in following normal lab procedures. The samples were received under Chain of Custody No. 2-110917-0010-0042-0002 from Weston Solutions, Inc.

PLM NYS ELAP 198.1

All friable bulk samples were analyzed via Polarized Light Microscopy (PLM) using the procedures from the PLM NYS ELAP 198.1 method. All data was reported on a percent asbestos basis with a limit of quantification for the PLM NYS ELAP 198.1 method (stratified point count/400 point count) as <1%. Per this method, any sample found to contain asbestos was subject to a stratified point count.

PLM NYS ELAP 198.6

All non-friable bulk samples were analyzed via Polarized Light Microscopy (PLM) using the gravimetric reduction procedures from the PLM NYS ELAP 198.6 method. All data was reported on a percent asbestos basis with a limit of quantification for the PLM NYS ELAP 198.6 method (stratified point count) as <1%. Per this method, any sample found to contain asbestos was subject to a stratified point count.

TEM NYS ELAP 198.4

Any non-friable bulk samples with results of "None Detected" or <1% asbestos as determined by PLM NYS ELAP 198.6 were analyzed via TEM using the procedures from the TEM NYS ELAP 198.4 NOB method. All data was reported on a % asbestos basis with a limit of quantification for this method of <1%.

QC Performed

One inter-analyst QC was completed via PLM NYS ELAP 198.6 with acceptable results. One intra-analyst QC analysis was completed via TEM NYS ELAP 198.4 with acceptable results. Also, one lab blank was analyzed via PLM NYS ELAP 198.6 and TEM NYS ELAP 198.4 with no asbestos detected. All QC was performed in compliance with EMSL's Quality Assurance Manual.

EMSL ANALYTICAL, INC.

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CINNAMINSON, NJ 08077
PHONE: (800) 220-3675
FAX: (856) 858-4960

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. In addition, I certify, that to the best of my knowledge and belief, the data as reported are true and accurate. Release of the data contained in this data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Darrah Johnson-McDaniel
Assistant Asbestos Laboratory Manager
EMSL Cinnaminson, NJ

2. Tabulated Sample Results

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com cinnaslab@EMSL.com

EMSL Order:	041732699
CustomerID:	RFWE53
CustomerPO:	RFP#472
ProjectID:	RFP 472

Attn: **Michael Mannino**
Weston Solutions (King Georges Post)
1090 King Georges Post Road
Suite 201
Edison, NJ 08837

Project: RFP #472

Phone:	(732) 585-4400
Fax:	
Received:	11/10/17 7:15 PM
Analysis Date:	11/19/2017
Collected:	11/9/2017

Test Report:Asbestos Analysis of Bulk Material

Test	Analyzed Date	Color	Non Asbestos Fibrous	Non-Fibrous	Asbestos
Sample ID P001-BULK009-01 *041732699-0001*		**Description** BULK009 **Homogeneity** Homogeneous			
PLM NYS 198.1 Friable	11/19/2017	Gray/White/Y	98.00% Glass	2.00% Non-fibrous (other)	None Detected
PLM NYS 198.6 VCM					Not Analyzed
PLM NYS 198.6 NOB					Not Analyzed
TEM NYS 198.4 NOB					Not Analyzed
Sample ID P001-BULK010-01 *041732699-0002*		**Description** BULK010 **Homogeneity** Homogeneous			
PLM NYS 198.1 Friable	11/19/2017	Brown/White	8.00% Cellulose 20.00% Glass	72.00% Non-fibrous (other)	None Detected
PLM NYS 198.6 VCM					Not Analyzed
PLM NYS 198.6 NOB					Not Analyzed
TEM NYS 198.4 NOB					Not Analyzed
Sample ID P001-BULK011-01 *041732699-0003*		**Description** BULK011 **Homogeneity** Homogeneous			
PLM NYS 198.1 Friable	11/19/2017	White		55.60% Non-fibrous (other)	33.30% Amosite 11.10% Chrysotile 44.40% Total
PLM NYS 198.6 VCM					Not Analyzed
PLM NYS 198.6 NOB					Not Analyzed
TEM NYS 198.4 NOB					Not Analyzed
Sample ID P001-BULK012-01 *041732699-0004*		**Description** BULK012 **Homogeneity** Homogeneous			
PLM NYS 198.1 Friable					Not Analyzed
PLM NYS 198.6 VCM					Not Analyzed
PLM NYS 198.6 NOB	11/19/2017	Gray/White	11.8% Min. Wool		Inconclusive: None Detected
TEM NYS 198.4 NOB	11/21/2017	Gray/White			None Detected

Initial Report From 11/21/2017 11:02:32

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com cinnaslab@EMSL.com

EMSL Order:	041732699
CustomerID:	RFWE53
CustomerPO:	RFP#472
ProjectID:	RFP 472

Test Report:Asbestos Analysis of Bulk Material

Test			Color	Non Asbestos Fibrous	Non-Fibrous	Asbestos
Sample ID	P001-BULK013-01 - Insulation *041732699-0005*		**Description** BULK013 **Homogeneity** Homogeneous			
PLM NYS 198.1 Friable		11/19/2017	Brown	70.00% Cellulose 15.00% Glass	10.92% Non-fibrous (other)	3.06% Amosite 1.02% Chrysotile 4.08% Total
PLM NYS 198.6 VCM						Not Analyzed
PLM NYS 198.6 NOB						Not Analyzed
TEM NYS 198.4 NOB						Not Analyzed
Sample ID	P001-BULK013-01 - Tar *041732699-0005A*		**Description** BULK013 **Homogeneity** Homogeneous			
PLM NYS 198.1 Friable						Not Analyzed
PLM NYS 198.6 VCM						Not Analyzed
PLM NYS 198.6 NOB		11/19/2017	Black			Inconclusive : <1%Amosite Inconclusive : <1%Chrysotile Inconclusive - <1% Total
TEM NYS 198.4 NOB		11/21/2017	Black			<1% Amosite <1% Chrysotile <1% Total
Sample ID	P001-BULK014-01-Insulation *041732699-0006*		**Description** BULK014 **Homogeneity** Homogeneous			
PLM NYS 198.1 Friable		11/19/2017	Gray/White		50.00% Non-fibrous (other)	50.00% Chrysotile
PLM NYS 198.6 VCM						Not Analyzed
PLM NYS 198.6 NOB						Not Analyzed
TEM NYS 198.4 NOB						Not Analyzed
Sample ID	P001-BULK014-01-Wrap *041732699-0006A*		**Description** BULK014 **Homogeneity** Homogeneous			
PLM NYS 198.1 Friable		11/19/2017	White	98.00% Cellulose	2.00% Non-fibrous (other)	None Detected
PLM NYS 198.6 VCM						Not Analyzed
PLM NYS 198.6 NOB						Not Analyzed
TEM NYS 198.4 NOB						Not Analyzed
Sample ID	P001-BULK015-01 *041732699-0007*		**Description** BULK015 **Homogeneity** Homogeneous			
PLM NYS 198.1 Friable		11/19/2017	Brown/Gray/	80.00% Cellulose	14.44% Non-fibrous (other)	4.17% Amosite 1.39% Chrysotile 5.56% Total
PLM NYS 198.6 VCM						Not Analyzed
PLM NYS 198.6 NOB						Not Analyzed
TEM NYS 198.4 NOB						Not Analyzed

Initial Report From 11/21/2017 11:02:32

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com cinnaslab@EMSL.com

EMSL Order:	041732699
CustomerID:	RFWE53
CustomerPO:	RFP#472
ProjectID:	RFP 472

Test Report:Asbestos Analysis of Bulk Material

Test			Color	Non Asbestos Fibrous	Non-Fibrous	Asbestos
Sample ID	**P001-BULK016-01** *041732699-0008*		**Description** BULK016 **Homogeneity** Homogeneous			
PLM NYS 198.1 Friable		**11/19/2017**	Gray/White	90.00% Glass	10.00% Non-fibrous (other)	**None Detected**
PLM NYS 198.6 VCM						**Not Analyzed**
PLM NYS 198.6 NOB						**Not Analyzed**
TEM NYS 198.4 NOB						**Not Analyzed**
Sample ID	**P001-BULK017-01** *041732699-0009*		**Description** BULK017 **Homogeneity** Homogeneous			
PLM NYS 198.1 Friable		**11/19/2017**	White		42.90% Non-fibrous (other)	**57.10% Amosite** **<1% Chrysotile** **57.10% Total**
PLM NYS 198.6 VCM						**Not Analyzed**
PLM NYS 198.6 NOB						**Not Analyzed**
TEM NYS 198.4 NOB						**Not Analyzed**
Sample ID	**P001-BULK018-01** *041732699-0010*		**Description** BULK018 **Homogeneity** Homogeneous			
PLM NYS 198.1 Friable						**Not Analyzed**
PLM NYS 198.6 VCM						**Not Analyzed**
PLM NYS 198.6 NOB		**11/19/2017**	White/Silver/ Yellow	27.6% Min. Wool		**Inconclusive: None Detected**
TEM NYS 198.4 NOB		**11/21/2017**	White/Silver/ Yellow			**None Detected**

Analyst(s)
Matthew Hermann
Ted Young

Benjamin Ellis, Laboratory Manager
or other approved signatory

NOB = Non Friable Organically Bound N/A = Not Applicable VCM = Vermiculite Containing Material

-In New York State, TEM is currently the only method that can be used to determine if NOB materials can be considered or treated as non-asbestos containing.
All samples examined for the presence of vermiculite when analyzed via NYS 198.1.
-NYS Guidelines for Vermiculite containing samples are available at http://www.wadsworth.org/labcert/elapcert/forms/VermiculiteInterimGuidance_Rev070913.pdf
EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. Samples were received in good condition unless otherwise noted.
This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government. This report may contain data that is not covered by the NVLAP accreditation.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NYS ELAP 10872, PA ID# 68-00367

Initial Report From 11/21/2017 11:02:32

USEPA
DateShipped: 11/10/2017
CarrierName: Hand Delivered
AirbillNo: NA

CHAIN OF CUSTODY RECORD
RFP Site #: 472
Contact Name: Michael Mannino
Contact Phone: 732-570-4997

No: 2-110917-0010-0042-0002
Lab: EMSL Analytical, Inc.
Lab Address: 200 Route 130 North
Lab Phone: 856-858-4800 x2304

041732699

Lab #	Sample #	Location	Matrix	Sample Date	Sample Time	Numb Cont	Container	Analyses	Preservative	Lab QC
	P001-BULK009-01	BULK009	Asbestos	11/9/2017	11:30	1	Poly Bag	Asbestos PLM/TEM	None	N
	P001-BULK010-01	BULK010	Asbestos	11/9/2017	11:35	1	Poly Bag	Asbestos PLM/TEM	None	N
	P001-BULK011-01	BULK011	Asbestos	11/9/2017	11:40	1	Poly Bag	Asbestos PLM/TEM	None	N
	P001-BULK012-01	BULK012	Asbestos	11/9/2017	11:45	1	Poly Bag	Asbestos PLM/TEM	None	N
	P001-BULK013-01	BULK013	Asbestos	11/9/2017	11:50	1	Poly Bag	Asbestos PLM/TEM	None	N
	P001-BULK014-01	BULK014	Asbestos	11/9/2017	11:55	1	Poly Bag	Asbestos PLM/TEM	None	N
	P001-BULK015-01	BULK015	Asbestos	11/9/2017	12:10	1	Poly Bag	Asbestos PLM/TEM	None	N
	P001-BULK016-01	BULK016	Asbestos	11/9/2017	12:20	1	Poly Bag	Asbestos PLM/TEM	None	N
	P001-BULK017-01	BULK017	Asbestos	11/9/2017	12:30	1	Poly Bag	Asbestos PLM/TEM	None	N
	P001-BULK018-01	BULK018	Asbestos	11/9/2017	12:45	1	Poly Bag	Asbestos PLM/TEM	None	N

Special Instructions: Samples will be analyzed via NYS ELAP PLM Methods 198.1 (friable) and 198.6 (non-friable) and via NYS TEM Method 198.4, if PLM result is <0.1%. TAT: 1 week prelimiary/2 weeks validated. Please send analytical results to S.Sumbaly@WestonSolutions.com, Mike.Mannino@WestonSolutions.com, ben.nwosu@westonsolutions.com

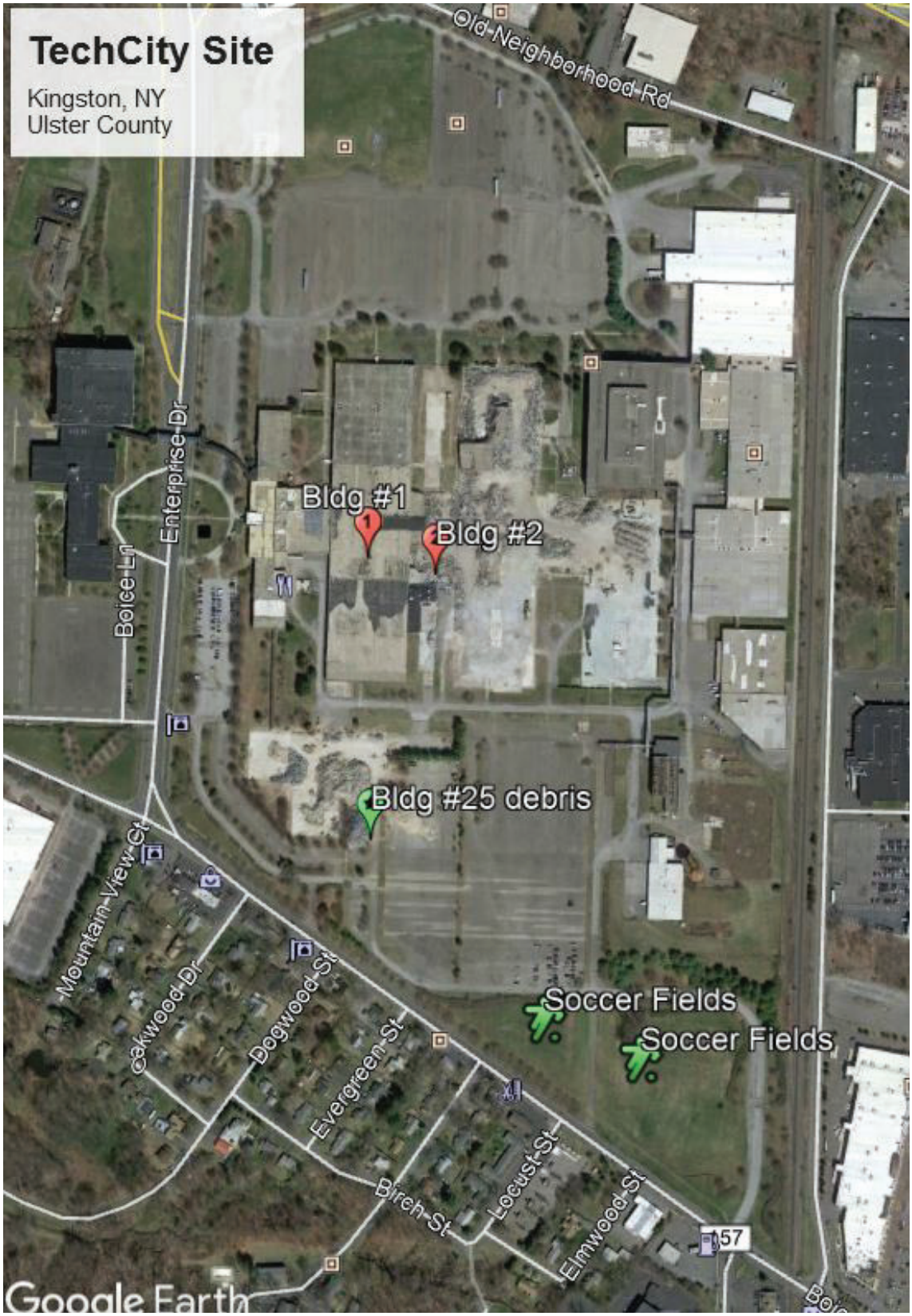
SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	(Weston)	11/10/17 1421		11-10-17, 14:21	
		11-10-17, 19:20	courier	11/10/17 715p	

RECEIVED
2017 NOV 10 P 1:19
CINNAMINSON, NJ

FIGURE 1

Site Location Map


TechCity Site
Kingston, NY
Ulster County
Old Neighborhood Rd
Enterprise Dr
Boice Ln
Bldg #1
Bldg #2
Bldg #25 debris
Mountain View Ct
Oakwood Dr
Dogwood St
Evergreen St
Soccer Fields
Soccer Fields
Birch St
Locust St
Elmwood St
57
Google Earth

Attachment 2
Envirologic Asbestos Contamination Report

3 Neptune Road – Suite A-18E
Poughkeepsie, New York 12601
845.462.1466 (phone)
845.462.1476 (fax)
www.envirologicny.com

Asbestos Contamination Assessment Report

performed for

Ulster County Department of Public Works
313 Shamrock Lane
Kingston, New York 12401

performed by

Envirologic of New York, Inc.
3 Neptune Road – Suite A-18E
Poughkeepsie, New York 12601

performed at

Tech City Building 001
300 Enterprise Drive
Kingston, New York 12401

Friday, November 10th, 2017

Report #10785

3 Neptune Road – Suite A-18E
Poughkeepsie, New York 12601
845.462.1466 (phone)
845.462.1476 (fax)
www.envirologicny.com

Section #1: Assessment Information:

Project Description:	Asbestos Contamination Assessment Tech City Building 001 300 Enterprise Drive Kingston, New York 12401	
Client:	**Ulster County Department of Public Works** 313 Shamrock Lane Kingston, New York 12401	
Survey Performed by:	**Envirologic of New York, Inc.** 3 Neptune Road – Suite A-18E Poughkeepsie, New York 12601 845.462.1466 (phone) 845.462.1476 (fax) info@elogicny.com NYSDOL Asbestos Handling License 29383	
Bulk Sampling Performed by:	Kyle Mungavin – NYSDOL Certificate AH-98.13119	
Dates Performed:	Wednesday, October 18th, 2017 Thursday, October 26th, 2017 Tuesday, October 31st, 2017 Wednesday, November 1st, 2017 Friday, November 10th, 2017	
Bulk Sample Analysis Performed by:	AmeriSci New York, Inc. 117 East 30th Street New York, New York 10016 NYSDOH ELAP #11480	Paradigm Environmental Services, Inc. 1815 Love Road Grand Island, New York 14072 NYSDOH ELAP # 11955

3 Neptune Road – Suite A-18E
Poughkeepsie, New York 12601
845.462.1466 (phone)
845.462.1476 (fax)
www.envirologicny.com

Section #2: Introduction:

Envirologic of New York, Inc. (**ENVIROLOGIC**) was hired by the **Ulster County DPW** to perform an Asbestos Contamination Assessment of the **Former Tech City Building 001** located at **300 Enterprise Drive, Kingston, New York 12401.**

The building was taken position by Ulster County due to unpaid taxes. The prior owner of the building was in the process of asbestos abatement for the purpose of demolition. During the course of the asbestos abatement, the New York State Department of Labor shut down the asbestos abatement project due to the improper removal of asbestos containing pipe insulation. Asbestos pipe insulation and other asbestos containing materials were being removed from areas of the building which were not within a regulated abatement work area. Additionally, an asbestos pre-demolition survey had not been performed to properly identify all asbestos containing materials within the building prior to demolition. Upon the shutdown of the asbestos abatement project, the entirety of the building has been deemed contaminated with asbestos.

In order to assess the extent of the asbestos contamination and identify all suspect asbestos containing materials within the building, Envirologic performed a complete asbestos pre-demolition and contamination assessment.

Section #3: Field Procedures:

In order to determine the extent of the contamination, **ENVIROLOGIC** employed the use of visual assessment and bulk material sampling.

1. Upon initiation of the investigation, the area where the potential for contamination exists was determined. Based on the materials, quantities, site conditions and source of the possible contamination, sampling strategy, including location, quantity and type of sampling to be performed was determined.
2. A Visual Assessment was performed of the aforementioned area to determine the presence of observable debris/contamination.
3. Bulk Material Sampling was performed to identify all suspect asbestos containing materials present.

3 Neptune Road – Suite A-18E
Poughkeepsie, New York 12601
845.462.1466 (phone)
845.462.1476 (fax)
www.envirologicny.com

Section #4: Summary of Findings:

ENVIROLGIC's description of the asbestos contamination and asbestos containing materials in this building is based on previously identified asbestos contamination, visual evidence in accessible and observable areas and on laboratory analysis reports of bulk samples from the premises. This report represents an accurate narrative of the location of asbestos contaminated areas and asbestos containing materials based on visual inspections and professional analysis and judgment. This report is current only as of the date of the inspection.

The visual inspection was performed by **ENVIROLOGIC** to determine the presence of asbestos contamination throughout the building. The entire interior of the building is presumed to be contaminated with asbestos as well as all porous and non-cleanable surfaces, including but not limited to, drywall, ceiling tiles, carpeting, all pipe insulation, piles of debris, etc. The interior of all HVAC duct is deemed contaminated due portions of the duct which had been open during the improper asbestos abatement. All equipment that was used during the asbestos abatement has been deemed contaminated, including all negative air machine HEPA filters. Bagged ACM waste is present throughout the building. The waste bags were inspected and found to contain dry asbestos waste materials.

Since no pre-demolition asbestos inspection was performed on the building all other suspect materials needed to be identified. A total of seventy-nine (79) bulk samples of suspect materials were taken at this location. Each homogenous area/material that has been determined to be an asbestos containing material (ACM) through laboratory analysis or a presumed asbestos containing (PACM) are identified and highlighted in yellow. The table also lists the estimated quantities and conditions of the ACM and PACM. The following table is a summary of all areas of asbestos material and/or contamination that were identified during the course of the assessment investigation.

Material Classification	LAB ID Number	Homogenous Material Description	Material Type	Condition	Approximate Quantity
Asbestos Contamination	*PACM*	*All pipe insulation*	*Friable*	*Significantly Damaged*	
Asbestos Contaminated	*PACM*	*All Interiors surfaces, finishes, ceiling tiles, drywall, debris, etc.*	*Friable*	*Significantly Damaged*	*600,000 sf*

3 Neptune Road – Suite A-18E
Poughkeepsie, New York 12601
845.462.1466 (phone)
845.462.1476 (fax)
www.envirologicny.com

Material Classification	LAB ID Number	Homogenous Material Description	Material Type	Condition	Approximate Quantity
ACM	*47619 47975 47976*	*Roof Tar on Deck*	*NOB*	*Damaged*	*250,000 sf*
ACM	*47979 47980*	*Roof Flashing Tar*	*NOB*	*Damaged*	*3,500 sf*
ACM	*47621 47622 47623 47624 47625*	*Floor Tile Mastic and Wood Block Floor Mastic*	*NOB*	*Good*	*168,400 sf*
Non-ACM	47626 47627	Floor Leveler	Friable	Not Applicable	Not Applicable
Non-ACM	47628 47629	Epoxy Flooring – Column L-M & 15-20	NOB	Not Applicable	Not Applicable
ACM	*47630 47631*	*Floor Leveler with Mastic*	*NOB*	*Damaged*	*Included in Above Quantity*
Non-ACM	47632 47633	Textured Flooring Column M18 – M19	NOB	Not Applicable	Not Applicable
Non-ACM	47620 47621 47622	Roof Insulation Panel	Friable	Not Applicable	Not Applicable
ACM	*47982 47983*	*Fan Rooms – AHU Joint Caulk – Tan*	*NOB*	*Good*	*6 AHUs 160 ft. each*

3 Neptune Road – Suite A-18E
Poughkeepsie, New York 12601
845.462.1466 (phone)
845.462.1476 (fax)
www.envirologicny.com

Material Classification	LAB ID Number	Homogenous Material Description	Material Type	Condition	Approximate Quantity
ACM	*47984 47985 47986 47987*	*Fan Room Electrical Panel/Cabinet Components*	*Non-Friable*	*Damaged*	*Unknown*
ACM	*47997 47998*	*Fan Room AHU Insulation Tar/Adhesive*	*NOB*	*Significantly Damaged*	*6 AHUs 450 sf each*
ACM	*47988*	*Wall Paneling – Colum K11 to K17, Column N12 to N13 & Column N22 to N26*	*Non-Friable*	*Damaged*	*8,750 sf*
ACM	*47989 47990*	*Mirror Adhesive – Lockers Rooms & Bathrooms*	*NOB*	*Good*	*Unknown*
Non-ACM	47991 47992	Ceramic Block Wall – Green	Non-Friable	Not Applicable	Not Applicable
Non-ACM	47993 47994	Ceramic Block Wall Grout	Non-Friable	Not Applicable	Not Applicable
Non-ACM	47995 47996	Wall Sound Panel Adhesive – Column N-15 – Tan	NOB	Not Applicable	Not Applicable
Non-ACM	47999 48000	Wire Insulation	NOB	Not Applicable	Not Applicable
Non-ACM	48001 48002	Fan Room AHU Vibration Dampener	Friable	Not Applicable	Not Applicable

3 Neptune Road – Suite A-18E
Poughkeepsie, New York 12601
845.462.1466 (phone)
845.462.1476 (fax)
www.envirologicny.com

Material Classification	LAB ID Number	Homogenous Material Description	Material Type	Condition	Approximate Quantity
Non-ACM	48003 48005 48007 48009 48011 48013	Ceiling Plaster Skim Coat - White – Alcoves	Friable	Not Applicable	Not Applicable
Non-ACM	48004 48006 48008 48010 48012 48014	Ceiling Plaster Base Coat – Grey – Alcoves	Friable	Not Applicable	Not Applicable
Non-ACM	48130 48134	Cove Base Molding – Grey	NOB	Not Applicable	Not Applicable
Non-ACM	48131 48135	Cove Base Adhesive – Tan	NOB	Not Applicable	Not Applicable
Non-ACM	48132 48136	Raised Floor Wall Adhesive – South End	NOB	Not Applicable	Not Applicable
Non-ACM	48133 48139	Window Glazing	NOB	Not Applicable	Not Applicable
Non-ACM	48137 48138	Terrazzo Flooring	Non-Friable	Not Applicable	Not Applicable
ACM	*48140* *48141*	*Window Sill Expansion Joint*	*NOB*	*Damaged*	*260 ft Unknown between bldgs*
Non-ACM	48142 48143	Window Caulking – Outer Layer	NOB	Not Applicable	Not Applicable

3 Neptune Road – Suite A-18E
Poughkeepsie, New York 12601
845.462.1466 (phone)
845.462.1476 (fax)
www.envirologicny.com

Material Classification	LAB ID Number	Homogenous Material Description	Material Type	Condition	Approximate Quantity
ACM	*48144 48145*	*Window Caulk – Inner Layer*	*NOB*	*Damaged*	*6,500 ft Unknown between bldgs*
Non-ACM	48146 48147	Window Sill Expansion Caulk – Patch	NOB	Not Applicable	Not Applicable
Non-ACM	48166 48167	Glass Block Grout	NOB	Not Applicable	Not Applicable
ACM	*48168 48169*	*Interior Glass Block Caulk*	*NOB*	*Good*	*4,600 ft Unknown between bldgs*
Non-ACM	48170 48171	Terrazzo Floor Mortar	Non-Friable	Not Applicable	Not Applicable
PACM	-	Exterior Siding Paneling – East Side Rollup Door	Non-Friable	Good	150 sf.

Notes:

1. As per NYSDOL ICR 56-2.1 (p), an Asbestos Containing Material (ACM) is defined as any material containing greater than one percent (1%) of asbestos, also known as Asbestos Material. Samples determined to be ACM are identified by ***bold/italicized type and are highlighted in yellow***.

2. All quantities of asbestos containing material are approximations. All quantities of asbestos containing materials should be field verified by prospective asbestos abatement contractors prior to providing asbestos abatement costs for the aforementioned materials.

3 Neptune Road – Suite A-18E
Poughkeepsie, New York 12601
845.462.1466 (phone)
845.462.1476 (fax)
www.envirologicny.com

Section #5: Final Notes:

Once a disturbance/contamination has been discovered, all efforts must be made for the disturbance/contamination to be cleaned up as soon as possible. For all disturbances, the room/space/area must be vacated and isolated immediately, and a New York State licenses asbestos contractor must be hired for appropriate cleanup of affected room/area/space. A site-specific variance will be required for cleanup of any disturbance other than a Minor Size (<10 ft2) incidental disturbance.

Unassessed PACM or suspect miscellaneous ACM shall be treated and handled as ACM and assumed to be ACM, unless proven otherwise by standard EPA and OSHA accepted methods, including multilayered systems sampling protocols; subsequent analyses performed by a laboratory that meets the requirements ICR-56; and the analyses satisfies both NYS ELAP and federal requirements, including multilayered sample analyses, to document non-asbestos containing material.

The report represents the opinion of the reporting inspector at the time of the limited asbestos survey and accurately reflects Federal, State, and Local guidelines.

Due to know dangers and health effects of human exposure to airborne asbestos fibers, there exist both Federal and State regulations and recommendations which must be followed in the asbestos removal process.

3 Neptune Road – Suite A-18E
Poughkeepsie, New York 12601
845.462.1466 (phone)
845.462.1476 (fax)
www.envirologicny.com

Section #6: Disclaimer:

This report is for your exclusive use and is only to be used as a guide in determining the presence and condition of Asbestos-Containing Materials in the subject premises at the time of the inspection.

All quantities of asbestos containing material are approximations. All quantities of asbestos containing materials should be field verified by prospective asbestos abatement contractors prior to providing asbestos abatement costs for the aforementioned materials.

This report is based solely upon a visual inspection and sampling of the premises where accessible at the time inspection was performed and makes no determinations with respect to portions of the premises that were not tested.

ENVIROLOGIC assumes no liability with respect to your compliance with local, state, or federal statutes, regulations or rules. This report sets forth relevant excerpts from manuals published by the EPA; however, **ENVIROLOGIC** assumes no responsibility for the credibility and completeness of the said excerpted material or future modifications of the same.

ENVIROLOGIC also assumes no liability for the use of this report by any other person or entity than the customer for whom it has been prepared. Any and all liability on the part of **ENVIROLOGIC** shall be limited solely to the cost of this survey report. **ENVIROLOGIC** shall have no liability for any other damages, whether consequential, compensatory, punitive, or special, arising out of, incidental to, or as a result of this report.

Prepared by:

Kyle Mungavin
Director of Field Operations
Envirologic of New York, Inc.

New York State – Department of Labor
Division of Safety and Health
License and Certificate Unit
State Campus, Building 12
Albany, NY 12240

ASBESTOS HANDLING LICENSE

Envirologic of New York, Inc.

6950 East Genesee Street

Fayetteville, NY 13066

FILE NUMBER: 99-0540
LICENSE NUMBER: 29383
LICENSE CLASS: RESTRICTED
DATE OF ISSUE: 05/04/2017
EXPIRATION DATE: 06/30/2018

Duly Authorized Representative – George E Hanover:

This license has been issued in accordance with applicable provisions of Article 30 of the Labor Law of New York State and of the New York State Codes, Rules and Regulations (12 NYCRR Part 56). It is subject to suspension or revocation for a (1) serious violation of state, federal or local laws with regard to the conduct of an asbestos project, or (2) demonstrated lack of responsibility in the conduct of any job involving asbestos or asbestos material.

This license is valid only for the contractor named above and this license or a photocopy must be prominently displayed at the asbestos project worksite. This license verifies that all persons employed by the licensee on an asbestos project in New York State have been issued an Asbestos Certificate, appropriate for the type of work they perform, by the New York State Department of Labor.

Eileen M. Franko, Director
For the Commissioner of Labor

SH 432 (8/12)

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

Expires 12:01 AM April 01, 2018
Issued April 01, 2017

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. PAUL J. MUCHA
AMERICA SCIENCE TEAM NEW YORK INC
117 EAST 30TH ST
NEW YORK, NY 10016

NY Lab Id No: 11480

is hereby APPROVED as an Environmental Laboratory for the category
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
All approved subcategories and/or analytes are listed below:

Miscellaneous

Asbestos in Friable Material	Item 198.1 of Manual
	EPA 600/M4/82/020
Asbestos in Non-Friable Material-PLM	Item 198.6 of Manual (NOB by PLM)
Asbestos in Non-Friable Material-TEM	Item 198.4 of Manual

Serial No.: 56034

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

Expires 12:01 AM April 01, 2018
Issued April 01, 2017

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MS. AMY L. DEMBSKI
PARADIGM ENVIRONMENTAL SERVICES
1815 LOVE ROAD
GRAND ISLAND, NY 14072

NY Lab Id No: 11955

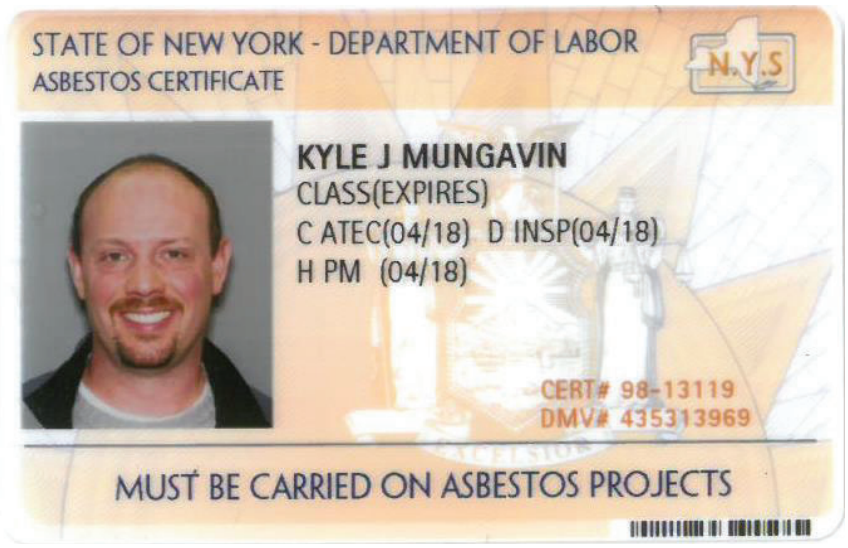
Is hereby APPROVED as an Environmental Laboratory for the category
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE
All approved subcategories and/or analytes are listed below:

Miscellaneous

Asbestos in Friable Material	Item 198.1 of Manual EPA 600/M4/82/020
Asbestos in Non-Friable Material-PLM	Item 198.6 of Manual (NOB by PLM)
Asbestos in Non-Friable Material-TEM	Item 198.4 of Manual

Serial No.: 56284

envirologic of New York, Inc.

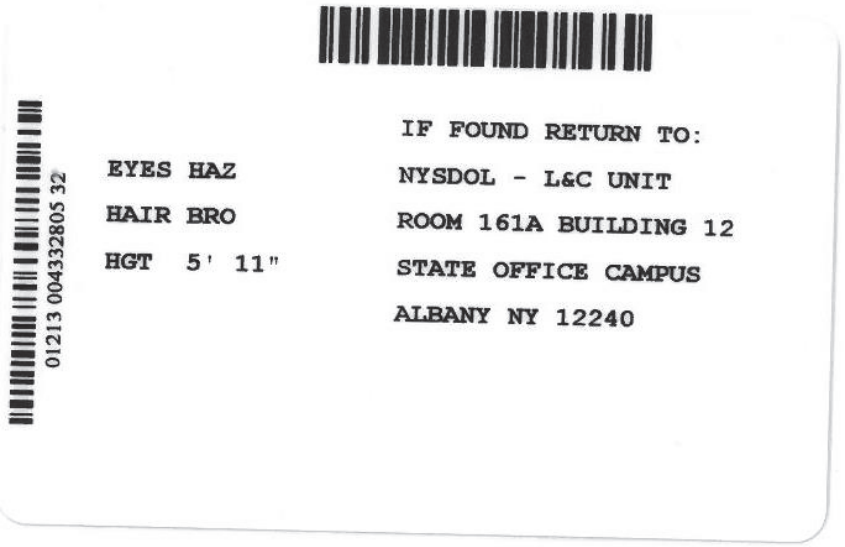

STATE OF NEW YORK - DEPARTMENT OF LABOR
ASBESTOS CERTIFICATE

N.Y.S

KYLE J MUNGAVIN
CLASS(EXPIRES)
C ATEC(04/18) D INSP(04/18)
H PM (04/18)

CERT# 98-13119
DMV# 435313969

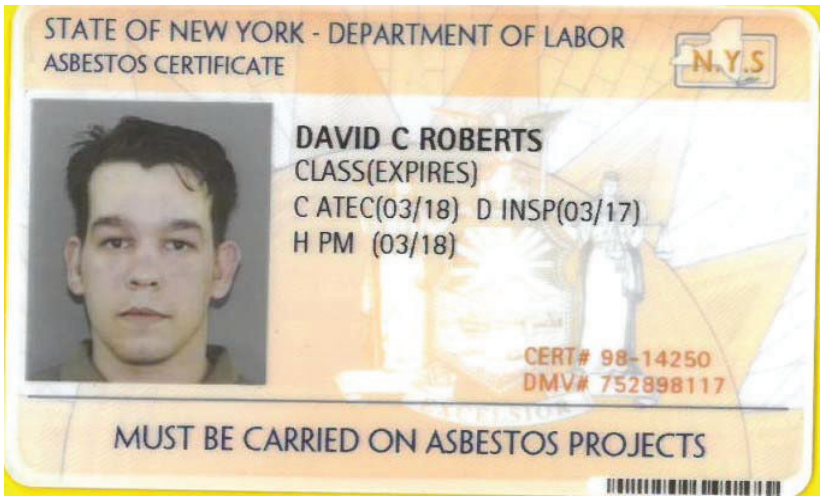
MUST BE CARRIED ON ASBESTOS PROJECTS

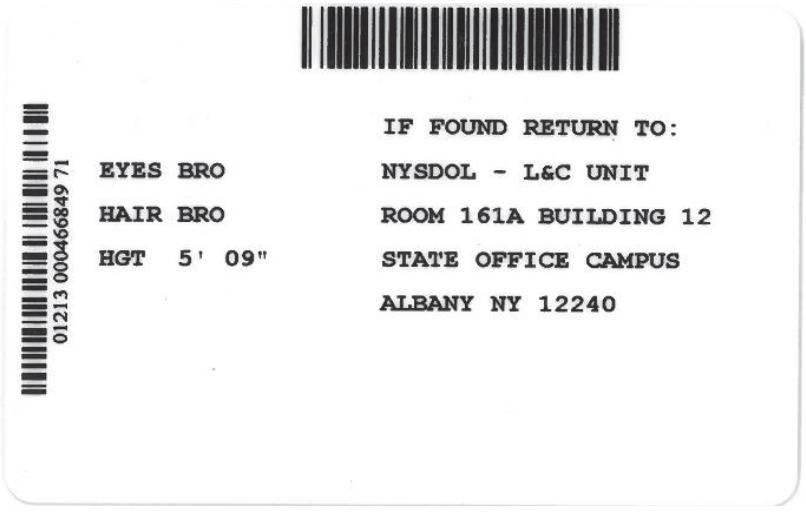

01213 004332805 32

EYES HAZ
HAIR BRO
HGT 5' 11"

IF FOUND RETURN TO:
NYSDOL - L&C UNIT
ROOM 161A BUILDING 12
STATE OFFICE CAMPUS
ALBANY NY 12240

envirologic of New York, Inc.





AmeriSci New York
117 EAST 30TH ST.
NEW YORK, NY 10016
TEL: (212) 679-8600 • FAX: (212) 679-3114

PLM Bulk Asbestos Report

Envirologic of New York
Attn: Jack Kunicki
3 Neptune Rd.
Suite A-10
Poughkeepsie, NY 12601

Date Received 10/20/17
Date Examined 10/24/17
ELAP # 11480
RE: ELE17B-605 / 10785

AmeriSci Job # 217103138
P.O. #
Page 1 **of** 4

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
47619	217103138-01	*Yes*	17.4 % (by NYS ELAP 198.6) by Bella J. Chernis on 10/24/17
Location: Roof Tar On Deck			
Analyst Description: Black, Heterogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** Chrysotile 17.4 % **Other Material:** Non-fibrous 26 %			
47620	217103138-02	*No*	NAD (by NYS ELAP 198.1) by Bella J. Chernis on 10/24/17
Location: Roof Deck			
Analyst Description: Grey, Homogeneous, Non-Fibrous, Cementitious, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 100 %			
47621	217103138-03	*No*	NAD (by NYS ELAP 198.6) by Bella J. Chernis on 10/24/17
Location: Floor Mastic L-5			
Analyst Description: Black, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 32.2 %			
47622	217103138-04	*Yes*	Trace (<0.25 % pc) [1] (EPA 400 PC) by Bella J. Chernis on 10/24/17
Location: Floor Mastic M-10			
Analyst Description: Black, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** Chrysotile <0.25 % pc **Other Material:** Non-fibrous 28.4 %			
47623	217103138-05	*Yes*	Trace (<0.25 % pc) [1] (EPA 400 PC) by Bella J. Chernis on 10/24/17
Location: Floor Mastic M-20			
Analyst Description: Black, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** Chrysotile <0.25 % pc **Other Material:** Non-fibrous 15.7 %			

See Reporting notes on last page

PLM Bulk Asbestos Report

ELE17B-605 / 10785

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
47624	217103138-06	***Yes***	Trace (<0.25 % pc) [1] (EPA 400 PC) by Bella J. Chernis on 10/24/17
Location: Floor Mastic L-24			
Analyst Description: Black, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** Chrysotile <0.25 % pc **Other Material:** Non-fibrous 36.7 %			
47625	217103138-07	***Yes***	Trace (<0.25 % pc) [1] (EPA 400 PC) by Bella J. Chernis on 10/24/17
Location: Floor Mastic M-23			
Analyst Description: Black, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** Chrysotile <0.25 % pc **Other Material:** Non-fibrous 23.9 %			
47626	217103138-08	***No***	NAD (by NYS ELAP 198.1) by Bella J. Chernis on 10/24/17
1 **Location:** Floor Leveler L-7			
Analyst Description: Grey, Homogeneous, Non-Fibrous, Cementitious, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 100 %			
47627	217103138-09	***No***	NAD (by NYS ELAP 198.1) by Bella J. Chernis on 10/24/17
1 **Location:** Floor Leveler L-7			
Analyst Description: Grey, Homogeneous, Non-Fibrous, Cementitious, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 100 %			
47628	217103138-10	***No***	NAD (by NYS ELAP 198.6) by Bella J. Chernis on 10/24/17
2 **Location:** Epoxy Floor			
Analyst Description: Grey, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 49.2 %			
47629	217103138-11	***No***	NAD (by NYS ELAP 198.6) by Bella J. Chernis on 10/24/17
2 **Location:** Epoxy Floor			
Analyst Description: Grey, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 3 %			

See Reporting notes on last page

PLM Bulk Asbestos Report

ELE17B-605 / 10785

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
47630 3	217103138-12 **Location:** Floor Leveler/Mastic	***Yes***	Trace (<0.25 % pc) [1] (EPA 400 PC) by Bella J. Chernis on 10/24/17
Analyst Description: Black, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** Chrysotile <0.25 % pc **Other Material:** Non-fibrous 8.3 % **Comment:** Submitted Only Mastic			
47631 3	217103138-13L1 **Location:** Floor Leveler Mastic	***Yes***	Trace (<0.25 % pc) [1] (EPA 400 PC) by Bella J. Chernis on 10/24/17
Analyst Description: Grey, Homogeneous, Fibrous, Cementitious, Bulk Material **Asbestos Types:** Chrysotile <0.25 % pc **Other Material:** Non-fibrous 6.1 %			
47631 3	217103138-13L2 **Location:** Floor Leveler	***Yes***	10 % (by NYS ELAP 198.1) by Bella J. Chernis on 10/24/17
Analyst Description: Grey, Homogeneous, Non-Fibrous, Cementitious, Bulk Material **Asbestos Types:** Chrysotile 10.0 % **Other Material:** Non-fibrous 90 %			
47632 4	217103138-14 **Location:** Textured Flooring	***Yes***	Trace (<0.25 % pc) [1] (EPA 400 PC) by Bella J. Chernis on 10/24/17
Analyst Description: Beige, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** Chrysotile <0.25 % pc **Other Material:** Non-fibrous 81.4 %			
47633 4	217103138-15 **Location:** Textured Flooring	***Yes***	Trace (<0.25 % pc) [1] (EPA 400 PC) by Bella J. Chernis on 10/24/17
Analyst Description: Beige, Heterogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** Chrysotile <0.25 % pc **Other Material:** Non-fibrous 54.1 %			

See Reporting notes on last page

PLM Bulk Asbestos Report

ELE17B-605 / 10785

Reporting Notes:

(1) Sample prepared for analysis by ELAP 198.6 method

Analyzed by: Bella J. Chernis Bella Chernis

*NAD/NSD =no asbestos detected; NA =not analyzed; NA/PS=not analyzed/positive stop, (SOF-V) = Sprayed On Fireproofing containing Vermiculite; (SM-V) = Surfacing Material containing Vermiculite; PLM Bulk Asbestos Analysis by EPA 600/M4-82-020 per 40 CFR 763 (NVLAP 200546-0), ELAP PLM Method 198.1 for NY friable samples, which includes the identification and quantitation of vermiculite or 198.6 for NOB samples or EPA 400 pt ct by EPA 600/M4-82-020 (NY ELAP Lab 11480); Note:PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. NAD or Trace results by PLM are inconclusive, TEM is currently the only method that can be used to determine if this material can be considered or treated as non asbestos-containing in NY State (also see EPA Advisory for floor tile, FR 59,146,38970,8/1/94) National Institute of Standards and Technology Accreditation requirements mandate that this report must not be reproduced except in full without the approval of the lab.This PLM report relates ONLY to the items tested. AIHA-LAP, LLC Lab ID 102843, RI Cert AAL-094, CT Cert PH-0186, Mass Cert AA000054.

Reviewed By: _____

END OF REPORT

Table I
Summary of Bulk Asbestos Analysis Results
ELE17B-605 / 10785

AmeriSci Sample #	Client Sample#	HG Area	Sample Weight (gram)	Heat Sensitive Organic %	Acid Soluble Inorganic %	Insoluble Non-Asbestos Inorganic %	** Asbestos % by PLM/DS	** Asbestos % by TEM
01	47619		0.325	51.7	4.9	26.0	Chrysotile 17.4	NA
Location:	Roof Tar On Deck							
02	47620		----	----	----	----	NAD	NA
Location:	Roof Deck							
03	47621		0.236	43.2	24.6	30.6	NAD	Chrysotile 1.6
Location:	Floor Mastic L-5							
04	47622		0.218	50.9	20.6	27.0	Chrysotile <0.25	Chrysotile 1.4
Location:	Floor Mastic M-10							
05	47623		0.254	73.2	11.0	14.1	Chrysotile <0.25	Chrysotile 1.6
Location:	Floor Mastic M-20							
06	47624		0.286	48.3	15.0	36.6	Chrysotile <0.25	Chrysotile Trace
Location:	Floor Mastic L-24							
07	47625		0.360	70.3	5.8	21.5	Chrysotile <0.25	Chrysotile 2.4
Location:	Floor Mastic M-23							
08	47626	1	----	----	----	----	NAD	NA
Location:	Floor Leveler L-7							
09	47627	1	----	----	----	----	NAD	NA
Location:	Floor Leveler L-7							
10	47628	2	0.299	33.8	17.1	49.2	NAD	NAD
Location:	Epoxy Floor							
11	47629	2	0.298	36.9	60.1	3.0	NAD	NAD
Location:	Epoxy Floor							
12	47630	3	0.251	85.7	6.0	6.7	Chrysotile <0.25	Chrysotile 1.7
Location:	Floor Leveler/Mastic							
13L1	47631	3	0.195	90.3	3.6	4.6	Chrysotile <0.25	Chrysotile 1.6
Location:	Floor Leveler Mastic							
13L2	47631	3	----	----	----	----	Chrysotile 10.0	NA/PS
Location:	Floor Leveler							
14	47632	4	0.129	8.5	25.6	65.4	Chrysotile <0.25	Chrysotile <1.0
Location:	Textured Flooring "Total Asbestos Concentration For Multiple Asbestos Types Present Is Less Than 1%"							Amosite <1.0
15	47633	4	0.218	25.7	20.2	53.9	Chrysotile <0.25	Chrysotile <1.0
Location:	Textured Flooring							

See Reporting notes on last page

Table I
Summary of Bulk Asbestos Analysis Results
ELE17B-605 / 10785

AmeriSci Sample #	Client Sample#	HG Area	Sample Weight (gram)	Heat Sensitive Organic %	Acid Soluble Inorganic %	Insoluble Non-Asbestos Inorganic %	** Asbestos % by PLM/DS	** Asbestos % by TEM

Analyzed by: Karol H. Lu_____; Date Analyzed 10/25/2017

**Quantitative Analysis (Semi/Full); Bulk Asbestos Analysis - PLM by EPA 600/M4-82-020 per 40 CFR or ELAP 198.1 for New York friable samples or ELAP 198.6 for New York NOB samples; TEM (Semi/Full) by EPA 600/R-93/116 (not covered by NVLAP Bulk accreditation) or ELAP 198.4; for New York samples; NAD = no asbestos detected during a quantitative analysis; NA = not analyzed; Trace = <1%; (SOF-V) = Sprayed On Fireproofing containing Vermiculite; (SM-V) = Surfacing Material containing Vermiculite; Quantitation for beginning weights of <0.1 grams should be considered as qualitative only; Qualitative Analysis: Asbestos analysis results of "Present" or "NVA = No Visible Asbestos" represents results for Qualitative PLM or TEM Analysis only (no accreditation coverage available from any regulatory agency for qualitative analyses): NVLAP (PLM) 200546-0, NYSDOH ELAP Lab 11480, AIHA-LAP, LLC (PLM) Lab ID 102843.

Warning Note: PLM limitation, only TEM will resolve fibers <0.25 micrometers in diameter. TEM bulk analysis is representative of the fine grained matrix material and may not be representative of non-uniformly dispersed debris for which PLM evaluation is recommended (i.e. soils and other heterogenous materials).

Reviewed By:_____

Asbestos Bulk Sampling Chain-of-Custody

envirologic of New York, Inc.
3 Neptune Road, Suite A-18E
Poughkeepsie, New York 12601
845.462.1466 (phone)
845.462.1476 (fax)
www.envirologicny.com

Client Name:	Date of Sample Collection:
Ulster County DPW	10/18/17
Project Name/Description:	**Project Number:**
Tech City Bldg 601	17B-605
Project Location: Enterprise Drive Kingston, NY	**Report Number:** 10785

Client Name:	Client Telephone:	Client Email:

	Lab ID	Field ID	Sample Description/Location/Condition	Estimated Quantity	Color	Sample Type	
+	47619	1	Roof Tar on deck		Black	NOB	+
	47620	2	Roof deck panel		gray	Friable	
+	47621	3	Floor mastic Col L-5		Black	NOB	+
+	47622	4	Floor mastic Col M-10		↓	↓	+
+	47623	5	Floor mastic Col N-20				+
	47624	6	Floor mastic Col L-24				
+	47625	7	WBF Mastic Col M-23				+
	47626	8	Floor leveler Col L-7		Friable ⇨	Gray	
	47627	9	Floor leveler Col L-7		↓		
	47628	10	Epoxy flooring Col L-17		Grey	NOB	

Inspector Name:	Inspector Signature:	Date:
Kyle Munagun		10/18/17
Inspector Certificate Number:	**Received at Lab by:**	**Date:**
98-13119		10/19/17
Requested Turnaround Time: ○ Rush ○ 24 Hour ⊗ 72 Hour ○ 120 Hour ○ 5 Day		**Subcontracted to:** 11480

envirologic of New York, Inc.

Asbestos Bulk Sampling Chain-of-Custody

3 Neptune Road, Suite A-18E
Poughkeepsie, New York 12601
845.462.1466 (phone)
845.462.1476 (fax)
www.envirologicny.com

Client Name:			Date of Sample Collection:
Ulster County DPW			10/18/17
Project Name/Description:			Project Number:
Tech City Bldg 601			17B-605
Project Location:			Report Number:
300 Enterprise Drive, Kingston, NY			10785
Client Name:	Client Telephone:	Client Email:	

	Lab ID	Field ID	Sample Description/Location/Condition	Estimated Quantity	Color	Sample Type	
	47629	11	Epoxy flooring - Col M-16		Grey	NOB	
+	47630	12	Floor leveler/mastic Col-L-16		Grey/black	F	
+	47631	13	Floor leveler/mastic Col L-16		↓	↓	+
	47632	14	Textured flooring M-16		Grey	NOB	
	47633	15	Textured flooring M-15		↓	↓	

Inspector Name:	Inspector Signature:	Date:
Kyle Mungam		10/18/17
Inspector Certificate Number:	Received at Lab by:	Date:
98-13119		10/19/17
Requested Turnaround Time:		Subcontracted to:

◯ Rush ◯ 24 Hour ◯ 72 Hour ◯ 120 Hour ◯ 5 Day

AmeriSci New York
117 EAST 30TH ST.
NEW YORK, NY 10016
TEL: (212) 679-8600 • FAX: (212) 679-3114

PLM Bulk Asbestos Report

Envirologic of New York
Attn: Jack Kunicki
3 Neptune Rd.
Suite A-10
Poughkeepsie, NY 12601

Date Received 10/28/17 **AmeriSci Job #** 217104091
Date Examined 10/30/17 **P.O. #**
ELAP # 11480 **Page** 1 **of** 8
RE: ELE17B-605; Lab Report # 10785

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
47975 1 **Location:** Roof Panel	217104091-01	***No***	NAD (by NYS ELAP 198.1) by Bo Sun on 10/30/17
Analyst Description: Grey, Homogeneous, Non-Fibrous, Cementitious, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 100 %			
47976 1 **Location:** Roof Panel	217104091-02	***No***	NAD (by NYS ELAP 198.1) by Bo Sun on 10/30/17
Analyst Description: Grey, Homogeneous, Non-Fibrous, Cementitious, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 100 %			
47977 2 **Location:** Roof Tar	217104091-03	***No***	NAD (by NYS ELAP 198.6) by Bo Sun on 10/30/17
Analyst Description: Black, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 1.1 %			
47978 2 **Location:** Roof Tar	217104091-04	***No***	NAD (by NYS ELAP 198.6) by Bo Sun on 10/30/17
Analyst Description: Black, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 0.4 %			
47979 3 **Location:** Flashing	217104091-05	***Yes***	4.7 % (by NYS ELAP 198.6) by Bo Sun on 10/30/17
Analyst Description: Black, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** Chrysotile 4.7 % **Other Material:** Non-fibrous 18.8 %			

See Reporting notes on last page

PLM Bulk Asbestos Report

ELE17B-605; Lab Report # 10785

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
47980 3	217104091-06 **Location:** Flashing		NA/PS
Analyst Description: Bulk Material **Asbestos Types:** **Other Material:**			
47981	217104091-07 **Location:** Cap Stone Caulk	***No***	NAD (by NYS ELAP 198.6) by Bo Sun on 10/30/17
Analyst Description: Grey, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 4.3 %			
47982 4	217104091-08 **Location:** AHU Joint Caulk	***Yes***	Trace (<0.25 % pc) [1] (EPA 400 PC) by Bo Sun on 10/30/17
Analyst Description: Tan, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** Chrysotile <0.25 % pc **Other Material:** Non-fibrous 9.5 %			
47983 4	217104091-09 **Location:** AHU Joint Caulk	***Yes***	Trace (<0.25 % pc) [1] (EPA 400 PC) by Bo Sun on 10/30/17
Analyst Description: Tan, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** Chrysotile <0.25 % pc **Other Material:** Non-fibrous 8.9 %			
47984 5	217104091-10 **Location:** Electrical Panel Components	***Yes***	11.8 % (by NYS ELAP 198.1) by Bo Sun on 10/30/17
Analyst Description: Grey, Homogeneous, Non-Fibrous, Cementitious, Bulk Material **Asbestos Types:** Chrysotile 11.8 % **Other Material:** Non-fibrous 88.2 %			
47985 5	217104091-11 **Location:** Electrical Panel Components		NA/PS
Analyst Description: Bulk Material **Asbestos Types:** **Other Material:**			

See Reporting notes on last page

PLM Bulk Asbestos Report

ELE17B-605; Lab Report # 10785

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
47986 5	217104091-12 **Location:** Electrical Panel Components		NA/PS
Analyst Description: Bulk Material **Asbestos Types:** **Other Material:**			
47987 5	217104091-13 **Location:** Electrical Panel Components		NA/PS
Analyst Description: Bulk Material **Asbestos Types:** **Other Material:**			
47988	217104091-14 **Location:** Wall Paneling	***Yes***	16.7 % (by NYS ELAP 198.1) by Bo Sun on 10/30/17
Analyst Description: Grey, Homogeneous, Fibrous, Cementitious, Bulk Material **Asbestos Types:** Chrysotile 16.7 % **Other Material:** Non-fibrous 83.3 %			
47989 6	217104091-15 **Location:** Mirror Adhesive	***Yes***	Trace (<0.25 % pc) [1] (EPA 400 PC) by Bo Sun on 10/30/17
Analyst Description: Black, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** Anthophyllite <0.25 % pc **Other Material:** Fibrous Talc 3 %, Non-fibrous 38.6 %			
47990 6	217104091-16 **Location:** Mirror Adhesive	***Yes***	Trace (<0.25 % pc) [1] (EPA 400 PC) by Bo Sun on 10/30/17
Analyst Description: Black, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** Anthophyllite <0.25 % pc **Other Material:** Fibrous Talc 4 %, Non-fibrous 35.5 %			
47991 7	217104091-17 **Location:** Ceramic Block	***No***	NAD (by NYS ELAP 198.1) by Bo Sun on 10/30/17
Analyst Description: Tan, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 100 %			

See Reporting notes on last page

PLM Bulk Asbestos Report

ELE17B-605; Lab Report # 10785

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
47992 7	217104091-18 **Location:** Ceramic Block	***No***	NAD (by NYS ELAP 198.1) by Bo Sun on 10/30/17
Analyst Description: Grey/Green, Homogeneous, Non-Fibrous, Cementitious, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 100 %			
47993 8	217104091-19 **Location:** Ceramic Grout	***No***	NAD (by NYS ELAP 198.1) by Bo Sun on 10/30/17
Analyst Description: Brown, Homogeneous, Non-Fibrous, Cementitious, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 100 %			
47994 8	217104091-20 **Location:** Ceramic Grout	***No***	NAD (by NYS ELAP 198.1) by Bo Sun on 10/30/17
Analyst Description: Brown, Homogeneous, Non-Fibrous, Cementitious, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 100 %			
47995 9	217104091-21 **Location:** Sound Panel Adhesive	***No***	NAD (by NYS ELAP 198.6) by Bo Sun on 10/30/17
Analyst Description: Brown, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 39.6 %			
47996 9	217104091-22 **Location:** Sound Panel Adhesive	***No***	NAD (by NYS ELAP 198.6) by Bo Sun on 10/30/17
Analyst Description: Brown, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 32.9 %			
47997 10	217104091-23 **Location:** AHU Insulation Adhesive	***Yes***	2.2 % (by NYS ELAP 198.6) by Bo Sun on 10/30/17
Analyst Description: Black, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** Chrysotile 2.2 % **Other Material:** Non-fibrous 8.7 %			

See Reporting notes on last page

PLM Bulk Asbestos Report

ELE17B-605; Lab Report # 10785

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
47998 10	217104091-24 **Location:** AHU Insulation Adhesive		NA/PS
Analyst Description: Bulk Material **Asbestos Types:** **Other Material:**			
47999 11	217104091-25 **Location:** Wire Insulation	***No***	NAD (by NYS ELAP 198.6) by Bo Sun on 10/30/17
Analyst Description: Black/Brown, Heterogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 1.7 %			
48000 11	217104091-26 **Location:** Wire Insulation	***No***	NAD (by NYS ELAP 198.6) by Bo Sun on 10/30/17
Analyst Description: Black/Brown, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 2.6 %			
48001 12	217104091-27 **Location:** Vibration Dampener	***No***	NAD (by NYS ELAP 198.6) by Bo Sun on 10/30/17
Analyst Description: Black, Heterogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 7.4 %			
48002 12	217104091-28 **Location:** Vibration Dampener	***No***	NAD (by NYS ELAP 198.6) by Bo Sun on 10/30/17
Analyst Description: Black, Heterogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 9.7 %			
48003 13	217104091-29 **Location:** Plaster Skim Coat	***No***	NAD (by NYS ELAP 198.1) by Bo Sun on 10/30/17
Analyst Description: White, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 100 %			

See Reporting notes on last page

PLM Bulk Asbestos Report

ELE17B-605; Lab Report # 10785

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
48004 14	217104091-30 **Location:** Plaster Base Coat	***No***	NAD (by NYS ELAP 198.1) by Bo Sun on 10/30/17
Analyst Description: Brown, Homogeneous, Non-Fibrous, Cementitious, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 100 %			
48005 13	217104091-31 **Location:** Plaster Skim Coat	***No***	NAD (by NYS ELAP 198.1) by Bo Sun on 10/30/17
Analyst Description: White, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 100 %			
48006 14	217104091-32 **Location:** Plaster Base Coat	***No***	NAD (by NYS ELAP 198.1) by Bo Sun on 10/30/17
Analyst Description: Brown, Homogeneous, Non-Fibrous, Cementitious, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 100 %			
48007 13	217104091-33 **Location:** Plaster Skim Coat	***No***	NAD (by NYS ELAP 198.1) by Bo Sun on 10/30/17
Analyst Description: White, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 100 %			
48008 14	217104091-34 **Location:** Plaster Base Coat	***No***	NAD (by NYS ELAP 198.1) by Bo Sun on 10/30/17
Analyst Description: Brown, Homogeneous, Non-Fibrous, Cementitious, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 100 %			
48009 13	217104091-35 **Location:** Plaster Skim Coat	***No***	NAD (by NYS ELAP 198.1) by Bo Sun on 10/30/17
Analyst Description: White, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 100 %			

See Reporting notes on last page

PLM Bulk Asbestos Report

ELE17B-605; Lab Report # 10785

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
48010 14	217104091-36 **Location:** Plaster Base Coat	***No***	NAD (by NYS ELAP 198.1) by Bo Sun on 10/30/17
Analyst Description: Brown, Homogeneous, Non-Fibrous, Cementitious, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 100 %			
48011 13	217104091-37 **Location:** Plaster Skim Coat	***No***	NAD (by NYS ELAP 198.1) by Bo Sun on 10/30/17
Analyst Description: White, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 100 %			
48012 14	217104091-38 **Location:** Plaster Base Coat	***No***	NAD (by NYS ELAP 198.1) by Bo Sun on 10/30/17
Analyst Description: Brown, Homogeneous, Non-Fibrous, Cementitious, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 100 %			
48013 13	217104091-39 **Location:** Plaster Skim Coat	***No***	NAD (by NYS ELAP 198.1) by Bo Sun on 10/30/17
Analyst Description: White, Homogeneous, Non-Fibrous, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 100 %			
48014 14	217104091-40 **Location:** Plaster Base Coat	***No***	NAD (by NYS ELAP 198.1) by Bo Sun on 10/30/17
Analyst Description: Brown, Homogeneous, Non-Fibrous, Cementitious, Bulk Material **Asbestos Types:** **Other Material:** Non-fibrous 100 %			

See Reporting notes on last page

PLM Bulk Asbestos Report

ELE17B-605; Lab Report # 10785

Reporting Notes:

(1) Sample prepared for analysis by ELAP 198.6 method

Analyzed by: Bo Sun Bo Sun

*NAD/NSD =no asbestos detected; NA =not analyzed; NA/PS=not analyzed/positive stop, (SOF-V) = Sprayed On Fireproofing containing Vermiculite; (SM-V) = Surfacing Material containing Vermiculite; PLM Bulk Asbestos Analysis by EPA 600/M4-82-020 per 40 CFR 763 (NVLAP 200546-0), ELAP PLM Method 198.1 for NY friable samples, which includes the identification and quantitation of vermiculite or 198.6 for NOB samples or EPA 400 pt ct by EPA 600/M4-82-020 (NY ELAP Lab 11480); Note:PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. NAD or Trace results by PLM are inconclusive, TEM is currently the only method that can be used to determine if this material can be considered or treated as non asbestos-containing in NY State (also see EPA Advisory for floor tile, FR 59,146,38970,8/1/94) National Institute of Standards and Technology Accreditation requirements mandate that this report must not be reproduced except in full without the approval of the lab.This PLM report relates ONLY to the items tested. AIHA-LAP, LLC Lab ID 102843, RI Cert AAL-094, CT Cert PH-0186, Mass Cert AA000054.

Reviewed By: _____

END OF REPORT

Table I
Summary of Bulk Asbestos Analysis Results
ELE17B-605; Lab Report # 10785

AmeriSci Sample #	Client Sample#	HG Area	Sample Weight (gram)	Heat Sensitive Organic %	Acid Soluble Inorganic %	Insoluble Non-Asbestos Inorganic %	** Asbestos % by PLM/DS	** Asbestos % by TEM
01	47975	1	----	----	----	----	NAD	NA
Location: Roof Panel								
02	47976	1	----	----	----	----	NAD	NA
Location: Roof Panel								
03	47977	2	0.189	98.4	0.5	1.1	NAD	NAD
Location: Roof Tar								
04	47978	2	0.277	92.1	7.6	0.4	NAD	NAD
Location: Roof Tar								
05	47979	3	0.179	72.1	4.5	18.8	Chrysotile 4.7	NA
Location: Flashing								
06	47980	3	0.374	66.8	7.0	26.2	NA/PS	NA
Location: Flashing								
07	47981		0.094	50.0	45.7	4.3	NAD	NAD
Location: Cap Stone Caulk								
08	47982	4	0.169	17.2	73.4	6.6	Chrysotile <0.25	Chrysotile 2.9
Location: AHU Joint Caulk								
09	47983	4	0.257	18.7	72.4	8.9	Chrysotile <0.25	NA/PS
Location: AHU Joint Caulk								
10	47984	5	----	----	----	----	Chrysotile 11.8	NA
Location: Electrical Panel Components								
11	47985	5	----	----	----	----	NA/PS	NA
Location: Electrical Panel Components								
12	47986	5	----	----	----	----	NA/PS	NA
Location: Electrical Panel Components								
13	47987	5	----	----	----	----	NA/PS	NA
Location: Electrical Panel Components								
14	47988		----	----	----	----	Chrysotile 16.7	NA
Location: Wall Paneling								
15	47989	6	0.255	50.2	8.2	37.4	Anthophyllite <0.25	Anthophyllite 4.2
Location: Mirror Adhesive								
16	47990	6	0.205	51.2	9.3	39.5	Anthophyllite <0.25	NA/PS
Location: Mirror Adhesive								

See Reporting notes on last page

Table I
Summary of Bulk Asbestos Analysis Results
ELE17B-605; Lab Report # 10785

AmeriSci Sample #	Client Sample#	HG Area	Sample Weight (gram)	Heat Sensitive Organic %	Acid Soluble Inorganic %	Insoluble Non-Asbestos Inorganic %	** Asbestos % by PLM/DS	** Asbestos % by TEM
17	47991	7	----	----	----	----	NAD	NA
Location: Ceramic Block								
18	47992	7	----	----	----	----	NAD	NA
Location: Ceramic Block								
19	47993	8	----	----	----	----	NAD	NA
Location: Ceramic Grout								
20	47994	8	----	----	----	----	NAD	NA
Location: Ceramic Grout								
21	47995	9	0.222	56.8	3.6	39.6	NAD	NAD
Location: Sound Panel Adhesive								
22	47996	9	0.161	59.0	8.1	32.9	NAD	NAD
Location: Sound Panel Adhesive								
23	47997	10	0.192	78.6	10.4	8.7	Chrysotile 2.2	NA
Location: AHU Insulation Adhesive								
24	47998	10	0.213	77.0	11.3	11.7	NA/PS	NA
Location: AHU Insulation Adhesive								
25	47999	11	0.346	66.5	31.8	1.7	NAD	NAD
Location: Wire Insulation								
26	48000	11	0.231	52.4	45.0	2.6	NAD	NAD
Location: Wire Insulation								
27	48001	12	0.258	81.4	11.2	7.4	NAD	NAD
Location: Vibration Dampener								
28	48002	12	0.267	79.4	10.9	9.7	NAD	NAD
Location: Vibration Dampener								
29	48003	13	----	----	----	----	NAD	NA
Location: Plaster Skim Coat								
30	48004	14	----	----	----	----	NAD	NA
Location: Plaster Base Coat								
31	48005	13	----	----	----	----	NAD	NA
Location: Plaster Skim Coat								
32	48006	14	----	----	----	----	NAD	NA
Location: Plaster Base Coat								

See Reporting notes on last page

Table I
Summary of Bulk Asbestos Analysis Results
ELE17B-605; Lab Report # 10785

AmeriSci Sample #	Client Sample#	HG Area	Sample Weight (gram)	Heat Sensitive Organic %	Acid Soluble Inorganic %	Insoluble Non-Asbestos Inorganic %	** Asbestos % by PLM/DS	** Asbestos % by TEM
33	48007	13	----	----	----	----	NAD	NA
Location:	Plaster Skim Coat							
34	48008	14	----	----	----	----	NAD	NA
Location:	Plaster Base Coat							
35	48009	13	----	----	----	----	NAD	NA
Location:	Plaster Skim Coat							
36	48010	14	----	----	----	----	NAD	NA
Location:	Plaster Base Coat							
37	48011	13	----	----	----	----	NAD	NA
Location:	Plaster Skim Coat							
38	48012	14	----	----	----	----	NAD	NA
Location:	Plaster Base Coat							
39	48013	13	----	----	----	----	NAD	NA
Location:	Plaster Skim Coat							
40	48014	14	----	----	----	----	NAD	NA
Location:	Plaster Base Coat							

Analyzed by: Paul J. Mucha; Date Analyzed 10/30/2017

**Quantitative Analysis (Semi/Full); Bulk Asbestos Analysis - PLM by EPA 600/M4-82-020 per 40 CFR or ELAP 198.1 for New York friable samples or ELAP 198.6 for New York NOB samples; TEM (Semi/Full) by EPA 600/R-93/116 (not covered by NVLAP Bulk accreditation) or ELAP 198.4; for New York samples; NAD = no asbestos detected during a quantitative analysis; NA = not analyzed; Trace = <1%; (SOF-V) = Sprayed On Fireproofing containing Vermiculite; (SM-V) = Surfacing Material containing Vermiculite; Quantitation for beginning weights of <0.1 grams should be considered as qualitative only; Qualitative Analysis: Asbestos analysis results of "Present" or "NVA = No Visible Asbestos" represents results for Qualitative PLM or TEM Analysis only (no accreditation coverage available from any regulatory agency for qualitative analyses): NVLAP (PLM) 200546-0, NYSDOH ELAP Lab 11480, AIHA-LAP, LLC (PLM) Lab ID 102843.

Warning Note: PLM limitation, only TEM will resolve fibers <0.25 micrometers in diameter. TEM bulk analysis is representative of the fine grained matrix material and may not be representative of non-uniformly dispersed debris for which PLM evaluation is recommended (i.e. soils and other heterogenous materials).

Reviewed By:

envirologic of New York, Inc.

Asbestos Bulk Sampling Chain-of-Custody

3 Neptune Road, Suite A-18E
Poughkeepsie, New York 12601
845.462.1466 (phone)
845.462.1476 (fax)
www.envirologicny.com

Client Name:			Date of Sample Collection:
Ulster Co. DPW			10/26/17
Project Name/Description:			Project Number:
Tech City BUOI			17B-605
Project Location:			Report Number:
Enterprise Drive, Kingston, NY			10785
Client Name:	Client Telephone:	Client Email:	

Lab ID	Field ID	Sample Description/Location/Condition	Estimated Quantity	Color	Sample Type
47975	1	Roof Panel		Grey	F
47976	2	Roof Panel		↓	↓
47977	3	Roofing Tar on deck		black	NOB
47978	4	Roofing Tar on deck		↓	↓
+ 47979	5	Roofing flashing Tar		black	NOB
47980	6	Roof flashing Tar		↓	↓
47981	7	Parapet Capstone caulk		grey	NOB
+ 47982	8	Fan Rm 4 AHU Joint Caulk		Tan	↓
47983	9	Fan Rm 4 AHU Joint Caulk		↓	F
+ 47984	10	Fan Rm 4 Elec. Panel Components		grey	↓

Inspector Name:	Inspector Signature:	Date:
Kyle Mungean		10/26/17
Inspector Certificate Number:	~~Received at Lab by:~~	Date:
98-13119		10/27/17
Requested Turnaround Time:		Subcontracted to:
○ Rush ○ 24 Hour ○ 72 Hour ○ 120 Hour ⊗ 5 Day		11480

Asbestos Bulk Sampling Chain-of-Custody

envirologic of New York, Inc.
3 Neptune Road, Suite A-18E
Poughkeepsie, New York 12601
845.462.1466 (phone)
845.462.1476 (fax)
www.envirologicny.com

Client Name:			Date of Sample Collection:
Ulster Co DPW			10/26/17
Project Name/Description:			Project Number:
Tech City Bldg			173.605
Project Location:			Report Number:
Enterprise Drive, Kingston, NY			10785
Client Name:	Client Telephone:	Client Email:	

Lab ID	Field ID	Sample Description/Location/Condition	Estimated Quantity	Color	Sample Type
47985	11	Fan Rm 4 Elec Panel Components		Grey	F
47986	12	Fan Rm 4 Elec. Panel Components		↓	↓
47987	13	Fan Rm 4 Elec. Panel Components		↓	↓
+ 47988	14	Wall paneling Col. N-24		Grey	F
+ 47989	15	Mirror Adhesive Locker Rm M-21		black	NOB
47990	16	Mirror Adhesive Lockers Rm M-21		↓	↓
47991	17	Ceramic block wall Col M-21		Green	F
47992	18	Ceramic block wall Col M-18		↓	↓
47993	19	Ceramic block grout Col M-21		Grey	↓
47994	20	Ceramic block grout Col M-18		↓	↓

Inspector Name:	Inspector Signature:	Date:
Kyle Mungavin		10/26/17
Inspector Certificate Number:	Received at Lab by:	Date:
98.13119		10/27/17
Requested Turnaround Time:		Subcontracted to:
○ Rush ○ 24 Hour ○ 72 Hour ○ 120 Hour ⊘ 5 Day		11480

envirologic of New York, Inc.

Asbestos Bulk Sampling Chain-of-Custody

3 Neptune Road, Suite A-18E
Poughkeepsie, New York 12601
845.462.1466 (phone)
845.462.1476 (fax)
www.envirologicny.com

Client Name:			Date of Sample Collection:
Ulster Co DPW			10/26/17
Project Name/Description:			Project Number:
Tech City BUO1			17B-605
Project Location:			Report Number:
Enterprise Drive, Kingston, NY			10785
Client Name:	Client Telephone:	Client Email:	

Lab ID	Field ID	Sample Description/Location/Condition	Estimated Quantity	Color	Sample Type
47995	21	Sound panel wall adhesive N-15		Tan	NOB
47996	22	Sound panel wall adhesive N-15		↓	↓
+ 47997	23	Fan Rm 4 AHU insulation tar/adhesive		black	
47998	24	Fan Rm 4 AHU insulation tar/adhesive		↓	
47999	25	Fan Rm 4 Wire insulation		black	
48000	26	Fan Rm 4 Wire insulation		↓	↓
48001	27	Fan Rm 4 AHU vibration damper		Tan	F
48002	28	Fan Rm 4 AHU Vibration dampener		↓	↓
48003	29	M-23 Ceiling Plaster Skim Coat		White	
48004	30	M-23 Ceiling Plaster base		Grey	

Inspector Name:	Inspector Signature:	Date:
Kyle Mungan		10/26/17
Inspector Certificate Number:	Received at Lab by:	Date:
98-13119		10/27/17
Requested Turnaround Time:		Subcontracted to:
○ Rush ○ 24 Hour ○ 72 Hour ○ 120 Hour ⊗ 5 Day		11480

Asbestos Bulk Sampling Chain-of-Custody

envirologic of New York, Inc.
3 Neptune Road, Suite A-18E
Poughkeepsie, New York 12601
845.462.1466 (phone)
845.462.1476 (fax)
www.envirologicny.com

Client Name:			Date of Sample Collection:
Ulster Co DPW			10/26/17
Project Name/Description:			Project Number:
Tech City B001			17B-605
Project Location:			Report Number:
Enterprise Drive, Kingston, NY			10785
Client Name:	Client Telephone:	Client Email:	

Lab ID	Field ID	Sample Description/Location/Condition	Estimated Quantity	Color	Sample Type
48005 ~~48004~~	31	N-20 Plaster - Skim Coat			F
48006 ~~48015~~	32	N-20 Plaster - base			
48007 ~~48016~~	33	M-20 Plaster Skim Coat			
48008 ~~48017~~	34	M-20 Plaster - base			
48009 ~~48018~~	35	M-18 Plaster - Skim Coat			
48010 ~~48019~~	36	M-18 Plaster - base			
48011 ~~48020~~	37	P-15 Plaster - Skim coat			
48012 ~~48021~~	38	P-15 Plaster - base			
48013 ~~48022~~	39	M-15 Plaster - Skim Coat			
48014 ~~48~~	40	M15 Plaster - base			

Inspector Name:	Inspector Signature:	Date:
Kyle Mungaan		10/26/17
Inspector Certificate Number:	Received at Lab by:	Date:
98-13119		10/27/17
Requested Turnaround Time:		Subcontracted to:
○ Rush ○ 24 Hour ○ 72 Hour ○ 120 Hour ⊗ 5 Day		11480

PARADIGM ENVIRONMENTAL SERVICES, INC. 1815 Love Road, Grand Island, New York Office: (716) 775-5777 Fax: (716) 775-5778

PLM & TEM BULK ASBESTOS REPORT via NYSDOH ELAP Method 198.1,198.4 and 198.6

Client: Envirologic of New York, Inc. **Job No:** 3360-17B
Location: ELE17B-605 **Page:** 1 of 4
Sample Date: 10/31/2017 **Sample Received Date:** 11/2/2017

Client ID	Lab ID	Sampling Location	Description	PLM Asbestos Fibers Type & Percentage	PLM Total Asbestos	NOB	TEM Asbestos Fibers Type & Percentage	TEM Total Asbestos	PLM Non-Asbestos Fibers Type & Percentage	PLM Matrix Material %	Sample Weight (g)	Heat Sensitive Organic Percentage	Acid Soluble Inorganic Percentage	Insoluble Inorganic Percentage
48129	27775	Cove Base Molding	Brown Cove Base Molding	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%	0.1035	62.13%	25.51%	12.37%
48130	27776	Cove Base Adhesive	Yellow Cove Base Adhesive	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%	0.1427	54.80%	2.73%	42.47%
48131	27777	Adhesive Raised Floor	Black Adhesive Raised Floor	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%	0.0513	75.44%	22.42%	2.14%
48132	27778	Window Glazing	Gray Window Glazing	<1.0% Residue Remaining. PLM and TEM Not Required.	N/A	X	N/A	N/A	N/A	N/A	0.1903	11.09%	88.54%	0.37%
48133	27779	Cove Base Molding	Brown Cove Base Molding	<1.0% Residue Remaining. PLM and TEM Not Required.	N/A	X	N/A	N/A	N/A	N/A	0.0945	45.71%	53.65%	0.63%
48134	27780	Cove Base Adhesive	White/Gray Cove Base Adhesive	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%	0.2202	68.12%	3.45%	28.43%
48135	27781	Adhesive Raised Floor	Black Adhesive Raised Floor	Inconclusive No Asbestos Detected	0%	√	None Detected	<1.0%	None Detected	100%	0.1310	57.63%	1.53%	40.84%
48136	27782	Terrazzo	Yellow Terrazzo	None Detected	0%		Not Required	N/A	None Detected	100%				
48137	27783	Terrazzo	Yellow Terrazzo	None Detected	0%		Not Required	N/A	None Detected	100%				
48138	27784	Window Glazing	Gray Window Glazing	<1.0% Residue Remaining. PLM and TEM Not Required.	N/A	X	N/A	N/A	N/A	N/A	0.1586	9.14%	90.79%	0.06%

KEY TO NOB COLUMN SYMBOLS

No Symbol in the NOB column denotes sample analyzed by ELAP Method 198.1 (PLM).

√ NOB (non-friable organically bound)denotes material analyzed by ELAP Method 198.6 (PLM) and 198.4 (TEM) as noted.

ELAP ID No.: 11955

Ṽ denotes material analyzed by ELAP Method 198.6 (PLM) per NYSDOH. This Method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.

# denotes friable material analyzed by ELAP Method 198.6 (PLM) and 198.4 (TEM) as noted.

X denotes sample prepped only by ELAP Method 198.6.

** Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos containing.

PLM Bulk Asbestos Analysis by New York State Department of Health, ELAP Method 198.1 ,198.4 and 198.6 ("Polarized Light Microscopy and Transmission Electron Microscopy Methods for Identifying and Quantitating Asbestos in Bulk Samples and in Non-Friable Organically Bound Bulk Samples.")or EPA 600/M4-82-020 per 40 CFR 763 and/or EPA 600/R-93/116 (NVLAP Lab Code 2000530-0).

PLM Date Analyzed: 11/7/2017 **TEM Date Analyzed:** 11/7/2017
Microscope: Olympus BH-2 #241709 **Microscope:** Hitachi 600AB
Analyst: *A. Maciejewski* **TEM Analyst:** A. Dembski

Laboratory Results Approved By: Amy Dembski

Asbestos Operations Manager or Designee **Amy Dembski**

PARADIGM ENVIRONMENTAL SERVICES, INC. 1815 Love Road, Grand Island, New York Office: (716) 775-5777 Fax: (716) 775-5778

PLM & TEM BULK ASBESTOS REPORT via NYSDOH ELAP Method 198.1,198.4 and 198.6

Client: Envirologic of New York, Inc. **Job No:** 3360-17B
Location: ELE17B-605 **Page:** 2 of 4
Sample Date: 10/31/2017 **Sample Received Date:** 11/2/2017

Client ID	Lab ID	Sampling Location	Description	PLM Asbestos Fibers Type & Percentage	PLM Total Asbestos	NOB	TEM Asbestos Fibers Type & Percentage	TEM Total Asbestos	PLM Non-Asbestos Fibers Type & Percentage	PLM Matrix Material %	Sample Weight (g)	Heat Sensitive Organic Percentage	Acid Soluble Inorganic Percentage	Insoluble Inorganic Percentage
48139	27785	Window Sill Caulk 1	Gray Window Sill Caulk	Chrysotile 6.7%	6.7%	√	Not Required	N/A	None Detected	93.3%	0.1976	24.14%	54.25%	21.61%
48140	27786	Window Sill Caulk 1	Gray Window Sill Caulk	STOP	POSITIVE	X	SAMPLE	NOT	ANALYZED	N/A	0.0880	19.09%	65.11%	15.80%
48141	27787	Window Caulk Exterior	Gray Window Caulk Exterior	Inconclusive Trace Chrysotile Detected	<1.0%	√	Trace Chrysotile <1.0%	<1.0%	None Detected	100%	0.0644	44.41%	31.37%	24.22%
48142	27788	Window Caulk Exterior	Gray Window Caulk Exterior	Inconclusive Trace Chrysotile Detected	<1.0%	√	Trace Chrysotile <1.0%	<1.0%	None Detected	100%	0.1476	44.51%	30.01%	25.47%
48143	27789	Window Caulk Interior	Gray Window Caulk Interior	Chrysotile 5.0%	5.0%	√	Not Required	N/A	None Detected	95%	0.2097	20.03%	63.90%	16.07%
48144	27790	Window Caulk Interior	Gray Window Caulk Interior	STOP	POSITIVE	X	SAMPLE	NOT	ANALYZED	N/A	0.0777	22.52%	64.22%	13.26%
48145	27791	Window Sill Caulk 2	Gray Window Sill Caulk	Inconclusive No Asbestos Detected	100%	√	None Detected	<1.0%	None Detected	100%	0.2054	53.51%	22.10%	24.39%
48146	27792	Window Sill Caulk 2	Gray Window Sill Caulk	Inconclusive No Asbestos Detected	100%	√	None Detected	<1.0%	None Detected	100%	0.1866	53.32%	22.94%	23.74%

KEY TO NOB COLUMN SYMBOLS

No Symbol in the NOB column denotes sample analyzed by ELAP Method 198.1 (PLM).

√ NOB (non-friable organically bound)denotes material analyzed by ELAP Method 198.6 (PLM) and 198.4 (TEM) as noted.

ELAP ID No.: 11955

Ÿ denotes material analyzed by ELAP Method 198.6 (PLM) per NYSDOH. This Method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.

# denotes friable material analyzed by ELAP Method 198.6 (PLM) and 198.4 (TEM) as noted.

X denotes sample prepped only by ELAP Method 198.6.

** Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos containing.

PLM Bulk Asbestos Analysis by New York State Department of Health, ELAP Method 198.1 ,198.4 and 198.6 ("Polarized Light Microscopy and Transmission Electron Microscopy Methods for Identifying and Quantitating Asbestos in Bulk Samples and in Non-Friable Organically Bound Bulk Samples."or EPA 600/M4-82-020 per 40 CFR 763 and/or EPA 600/R-93/116 (NVLAP Lab Code 2000530-0),

PLM Date Analyzed: 11/7/2017 **TEM Date Analyzed:** 11/7/2017
Microscope: Olympus BH-2 #241709 **Microscope:** Hitachi 600AB
Analyst: *A. Maciejewski* **TEM Analyst:** A. Dembski

Laboratory Results Approved By: Amy Dembski

Asbestos Operations Manager or Designee **Amy Dembski**

Asbestos Bulk Sampling Chain-of-Custody

envirologic of New York, Inc.
3 Neptune Road, Suite A-18E
Poughkeepsie, New York 12601
845.462.1466 (phone)
845.462.1476 (fax)
www.envirologicny.com

Client Name:		Date of Sample Collection:
Ulster Co DPW		10/31/17
Project Name/Description:		Project Number:
Tech City - Building 1		17B-605
Project Location:		Report Number:
300 Enterprise Dr. Kingston, NY 12401		60785
Client Name:	Client Telephone:	Client Email:

Lab ID	Field ID	Sample Description/Location/Condition	Estimated Quantity	Color	Sample Type
48130	1	cove base molding - S end near dock		grey	NOB
48131	2	cove base adhesive - S end near dock		tan	NOB
48132	3	adhesive-raised floor - S end neg air machines		black	NOB
48133	4	window glazing - col. N-26		grey	NOB
48134	5	cove base molding - col P-26		grey	NOB
48135	6	cove base adhesive - col P-26		tan	NOB
48136	7	adhesive - raised floor - col P-26		black	NOB
48137	8	terrazo - col M-16			
48138	9	terrazo ↓			
48139	10	window glazing - north entrance		grey	NOB

Inspector Name:	Inspector Signature:	Date:
D. Roberts		10/31/17
Inspector Certificate Number:	Received at Lab by:	Date:
98-14250		
Requested Turnaround Time: ○ Rush ○ 24 Hour ○ 72 Hour ○ 120 Hour ○ 5 Day		Subcontracted to:

Asbestos Bulk Sampling Chain-of-Custody

envirologic of New York, Inc.
3 Neptune Road, Suite A-18E
Poughkeepsie, New York 12601
845.462.1466 (phone)
845.462.1476 (fax)
www.envirologicny.com

Client Name:		Date of Sample Collection: 10/31/17
Project Name/Description: Tech City - Building 1		Project Number:
Project Location: 300 Enterprise Dr. Kingston, NY 12401		Report Number:
Client Name:	Client Telephone:	Client Email:

	Lab ID	Field ID	Sample Description/Location/Condition	Estimated Quantity	Color	Sample Type
+	48140	11	window sill expansion joint caulk - west side			NOB
	48141	12	window sill expansion joint caulk ↓			NOB
	48142	13	window caulk (outer) west side			NOB
	48143	14	window caulk (outer)			NOB
+	48144	15	window caulk (inner) west side			NOB
	48145	16	window caulk (inner)			NOB
	48146	17	window sill exp. joint caulk (rubbery) North			
	48147	18	window sill exp. joint caulk ↓ North			

Inspector Name: D. Roberts	Inspector Signature:	Date: 10/31/17
Inspector Certificate Number: 98 14250	Received at Lab by:	Date:
Requested Turnaround Time: ○ Rush ○ 24 Hour ○ 72 Hour ○ 120 Hour ○ 5 Day		Subcontracted to:

PARADIGM ENVIRONMENTAL SERVICES, INC. 1815 Love Road, Grand Island, New York Office: (716) 775-5777 Fax: (716) 775-5778

PLM & TEM BULK ASBESTOS REPORT via NYSDOH ELAP Method 198.1,198.4 and 198.6

Client: Envirologic of New York, Inc.
Location: ELE17B-605
Sample Date: 11/2/2017

Job No: 3381-17B
Page: 1 of 2
Sample Received Date: 11/3/2017

Client ID	Lab ID	Sampling Location	Description	PLM Asbestos Fibers Type & Percentage	PLM Total Asbestos	NOB	TEM Asbestos Fibers Type & Percentage	TEM Total Asbestos	PLM Non-Asbestos Fibers Type & Percentage	PLM Matrix Material %	Sample Weight (g)	Heat Sensitive Organic Percentage	Acid Soluble Inorganic Percentage	Insoluble Inorganic Percentage
48166	27938	Glass Block Grout	Gray Grout	None Detected	0%		Not Required	N/A	None Detected	100%				
48167	27939	Glass Block Grout	Gray Grout	None Detected	0%		Not Required	N/A	None Detected	100%				
48168	27940	Interior Glass Block Caulk	Brown Caulk	Chrysotile 8.4%	8.4%	√	Not Required	N/A	None Detected	91.6%	0.2829	27.01%	56.27%	16.72%
48169	27941	Interior Glass Block Caulk	Brown Caulk	STOP	POSITIVE	X	SAMPLE	NOT	ANALYZED	N/A	0.2792	28.58%	56.70%	15.22%
48170	27942	Terrazzo Mortar	Brown Terrazzo Mortar	None Detected	0%		Not Required	N/A	None Detected	100%				
48171	27943	Terrazzo Mortar	Brown Terrazzo Mortar	None Detected	0%		Not Required	N/A	None Detected	100%				

KEY TO NOB COLUMN SYMBOLS

No Symbol in the NOB column denotes sample analyzed by ELAP Method 198.1 (PLM).

√ NOB (non-friable organically bound)denotes material analyzed by ELAP Method 198.6 (PLM) and 198.4 (TEM) as noted.

ELAP ID No.: 11955

Ṽ denotes material analyzed by ELAP Method 198.6 (PLM) per NYSDOH. This Method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.

# denotes friable material analyzed by ELAP Method 198.6 (PLM) and 198.4 (TEM) as noted.

X denotes sample prepped only by ELAP Method 198.6.

** Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos containing.

PLM Bulk Asbestos Analysis by New York State Department of Health, ELAP Method 198.1 ,198.4 and 198.6 ("Polarized Light Microscopy and Transmission Electron Microscopy Methods for Identifying and Quantitating Asbestos in Bulk Samples and in Non-Friable Organically Bound Bulk Samples.")or EPA 600/M4-82-020 per 40 CFR 763 and/or EPA 600/R-93/116 (NVLAP Lab Code 2000530-0),

PLM Date Analyzed: 11/8/2017
Microscope: Olympus BH-2 #241709
Analyst: *A. Maciejewski*

TEM Date Analyzed: N/A
Microscope: Hitachi 600AB
TEM Analyst: N/A

Laboratory Results Approved By: Amy Dembski

Asbestos Operations Manager or Designee **Amy Dembski**

Asbestos Bulk Sampling Chain-of-Custody

envirologic of New York, Inc.
3 Neptune Road, Suite A-18E
Poughkeepsie, New York 12601
845.462.1466 (phone)
845.462.1476 (fax)
www.envirologicny.com

Client Name:		Date of Sample Collection:
Ulster County		11/1/17
Project Name/Description:		Project Number:
TechCity - Bldg #1		17B-605
Project Location:		Report Number:
300 Enterprise Drive, Kingston, NY 12401		10785
Client Name:	Client Telephone:	Client Email:

Lab ID	Field ID	Sample Description/Location/Condition	Estimated Quantity	Color	Sample Type
48166	1	glass block grout			friable
48167	2	glass block grout			friable
+ 48168	3	interior glass block caulking			NOB
48169	4	interior glass block caulking			NOB
48170	5	terazzo mortar - near col. M-6			friable
48171	6	terazzo mortar ↓			friable

Inspector Name:	Inspector Signature:	Date:
D. Roberts		11/01/17
Inspector Certificate Number:	Received at Lab by:	Date:
98-14250		11/2/17
Requested Turnaround Time: ○ Rush ○ 24 Hour ○ 72 Hour ○ 120 Hour ○ 5 Day		Subcontracted to: 11955

Attachment 3
Hudson River Valley Environmental (HRVE) Asbestos Contamination Assessment (2017) and Atlas Environmental Lab Corp Analytical Results for HRVE Sampling Event (2015)

Asbestos Contamination Assessment

Prepared for:
TechCity Properties, INC
300 Enterprise Drive
Kingston, NY 12401

At:
Building 025
300 Enterprise Drive
Kingston, NY 12401

Monday, July 17th, 2017

Hudson River Valley Environmental, LLC | Environmental Sampling, Surveying, Consulting, and Design Services |
350 Enterprise Drive, Kingston, NY 12401
hrvenv@hrvenv.com | Phone: 1 (845) 514-2551 | Fax: 1 (845) 481-5979 | www.hrvenv.com

HUDSON RIVER VALLEY
ENVIRONMENTAL, LLC

Table of Contents

Section 1: Contamination Assessment Information
Section 2: Introduction
Section 3: Field Procedures
Section 4: Summary of Findings
Section 5: Disclaimer

Appendix A: Drawings and Floor Plans
Appendix B: Sample Results and Chains of Custody
Appendix C: Licenses and Certifications
Appendix D: Photographs

Section 1 – Contamination Assessment Information

Contamination Assessment Performed By:	Hudson River Valley Environmental, LLC
Asbestos License Number:	84131
Assessment Performed By:	Mr. Randy Turk
Dates Performed:	July 2017
PCM/TEM Sample Analysis Performed By:	N/A
Bulk Sample Analysis Performed By:	Metro Analytical Laboratories
Client:	TechCity Properties, INC 300 Enterprise Drive Kingston, NY 12401
Property:	Building 025 300 Enterprise Drive Kingston, NY 12401

Section 2: Introduction

Hudson River Valley Environmental was hired by ***TechCity Properties, INC*** to perform a contamination assessment demolition debris formerly known as Building 025, which is located at ***300 Enterprise Drive, Kingston, New York.*** The building was demolished in 2015 after TechCity Properties, INC received written notification from the Town of Ulster that an asbestos survey was not required.

Section 3: Field Procedures

In order to identify the extent of the contamination, **Hudson River Valley Environmental** employed the use of visual assessment, bulk sampling, Micro-vacuum dust sampling, and static PCM and/or TEM air sampling.

1. When a contamination is observed, every effort is made to determine the origination of the contamination. The building had been demolished without an asbestos building survey after the Town of Ulster stated it was not needed.

2. Bulk samples were collected from the three piles on the property as well as surrounding intact suspect material on the slab.

3. Static air sampling was **NOT** performed as part of this assessment.

4. Micro-vacuum dust sampling was **NOT** performed. The contamination assessment was able to be conducted by a visual inspection.

Section 4: Summary of Findings

Our description of the asbestos in the structure is based upon visual inspection in accessible areas and on laboratory results of Friable and Non-Friable Organically Bound (NOB) bulk samples from the premises. This report is an accurate narrative of the location and condition of asbestos containing materials based on laboratory analysis reports and professional judgment. This report is current only as of the date of the assessment.

In July of 2017, Hudson River Valley Environmental conducted multiple site visits on the property to assess for possible asbestos contamination in the debris piles. Numerous bulk samples were collected from varying types of building materials that were able to be identified from the building remains.

There are three piles on site. The most western pile contains mostly larger items such as concrete block, the middle pile is a fine mix similar to soil, and the eastern pile is sorted stone and crumbled building materials. HRVE sampled each pile to determine if there was asbestos containing material in some of the building materials. It is important to note that a full survey cannot be conducted due to the intermingling of debris from the building. Asbestos codes do not allow for a survey to be conducted for a building that had been demolished.

Two samples have tested positive for asbestos, and both were mastics. Vermiculite was found in the piles as well, however further analysis found this below the criteria where vermiculite would be considered asbestos containing.

The client wishes to use the material as fill for other projects that will be taking place on site. In conversation with the NYS Department of Environmental Conservation, mastic can be left in fill, however items such as floor tile (even as non-acm) must be removed. A second sorting of the material would be required.

Due to the positive test results, the NYS Department of Labor at this time would consider the piles asbestos containing. We recommend writing a site-specific variance to work with the NYS DOL on removing the piles under NYS DEC guidelines. As stated previously, as the piles are now, the NYS DOL will consider them ACM debris due to positive test results and due to a building survey not being conducted.

Identified Area of Contamination	Source of Contamination	Approximate Quantity
Building 025	Demolition	150,000 ft^2

Section 5: Disclaimer

This report is for the exclusive use of the client and is to be used only as a guide in determining the presence of asbestos containing materials at the premises at the time of the inspection.

All quantities of asbestos containing materials are only approximations. All quantities of asbestos containing materials should be verified by abatement contractors prior to supplying estimations of costs on the abatement required.

This report is based solely upon visual inspection of contracted and accessible areas at the time of the inspection. This report shall not be applied to areas or buildings that were not inspected.

Hudson River Valley Environmental assumes no liability with respect to the building owners compliance with local, state, or federal regulations. **Hudson River Valley Environmental** assumes no liability for the use of this report by any other person or entity other than the customer it was prepared for. Any an all liability on the part of **Hudson River Valley Environmental** shall be limited solely to the cost of this survey report. **Hudson River Valley Environmental** shall have no liability for any other damages whether consequential, compensatory, punitive, or special, arising out of incidental to, or as a result of this report.

Prepared by:

Kristofer Landell, Principal
Hudson River Valley Environmental, LLC

Appendix A: Drawings and Floor Plans

Appendix B: Sample Results and Chains of Custody

METRO ANALYTICAL LABORATORIES
255 West 36th St., Suite #101
New York, NY 10018
p: (212) 695-0165 f: (212) 695-0183

ASBESTOS ANALYSIS of BULK SAMPLE by POLARIZED LIGHT MICROSCOPY and TRANSMISSION ELECTRON MICROSCOPY

Client:	**Hudson River Valley Environmental LLC**	Contract:	**Tech City**	**Metro Lab ID #:**	**B17060780**
Address:	350 Enterprise Drive	Client Job #:			
	Kingstone NY 12401	Location:			
	P: (845) 514-2551 F: (845) 581-5979		**Building #2**	Sample Received:	06/30/2017
				PLM Analysis Date:	06/30/2017
Contact:	**Kristofer S Landell**	Sampled By:	R.T.	TEM Analysis Date:	06/30/2017
	M: (845) 514-2551	Sampled Date:	06/28/2017	Amended By:	Tasheena Peel
	E: kris@hrvenv.com	Turnaround Time:	6 hrs	Amended Date:	07/10/2017

Summary of Analysis

LAB ID #	Client Sample #	Sample Description	Test	Fibrous Material	Non-Fibrous Material	Asbestos	Total Asbestos
1	1-DEBRIS	Brown / Grey Inhomogenous Fibrous PILE #1 - NORTH SIDE	NY ELAP 198.1 NY ELAP 198.6 NY ELAP 198.4	20% Cellulose 10% Fiberglass	65% Non-Fibrous 5% Vermiculite	**Analysis Halted**	
2	1	Black Homogenous NOB PILE #1 - NORTH SIDE	NY ELAP 198.1 NY ELAP 198.6 NY ELAP 198.4			**1.2% Chrysotile** **Not Analyzed**	**1.2%**
3	1-TILE	Beige Homogenous NOB PILE #1 - NORTH SIDE	NY ELAP 198.1 NY ELAP 198.6 NY ELAP 198.4			**Inconclusive** **None Detected** **None Detected**	
4	2-DEBRIS	Brown / Grey Inhomogenous Fibrous PILE #1 - SOUTH SIDE	NY ELAP 198.1 NY ELAP 198.6 NY ELAP 198.4	17% Cellulose 15% Fiberglass	60% Non-Fibrous 8% Vermiculite	**Analysis Halted**	
5	2-TILE	Beige Homogenous NOB PILE #1 - SOUTH SIDE	NY ELAP 198.1 NY ELAP 198.6 NY ELAP 198.4			**Inconclusive** **None Detected** **None Detected**	
6	2-BSMT MLDG	Black Homogenous NOB PILE #1 - SOUTH SIDE	NY ELAP 198.1 NY ELAP 198.6 NY ELAP 198.4			**Inconclusive** **None Detected**	
7	3-DEBRIS	Brown / Grey Inhomogenous Fibrous PILE #1 - EAST SIDE	NY ELAP 198.1 NY ELAP 198.6 NY ELAP 198.4	30% Cellulose 15% Fiberglass 10% Hair	50% Non-Fibrous 5% Vermiculite	**Analysis Halted**	
8	4-DEBRIS	Brown / Grey Inhomogenous Fibrous PILE #1 - WEST SIDE	NY ELAP 198.1 NY ELAP 198.6 NY ELAP 198.4	40% Cellulose 20% Fiberglass 20% Hair	36% Non-Fibrous 4% Vermiculite	**Analysis Halted**	
9	4-FOAM	Beige Homogenous NOB PILE #1 - WEST SIDE	NY ELAP 198.1 NY ELAP 198.6 NY ELAP 198.4			**Inconclusive** **None Detected** **None Detected**	
10	4-GLUE	White Homogenous NOB PILE #1 - WEST SIDE	NY ELAP 198.1 NY ELAP 198.6 NY ELAP 198.4			**Inconclusive** **None Detected** **None Detected**	

Comments: Samples 1 through 9,11,12, 13,14 analysis was terminated due to the presence of vermiculite. Results are inconclusive and must go for 198.8 method for further verification

Zlatan Dimitrijevic
Laboratory Director

Mike Isaac / Youssef Ibrahim
PLM Analyst

Moe Soliman
TEM Analyst

NYS ELAP ID # 12003

NVLAP Lab Code: 500081-0

METRO ANALYTICAL LABORATORIES
255 West 36th St., Suite #101
New York, NY 10018
p: (212) 695-0165 f: (212) 695-0183

ASBESTOS ANALYSIS of BULK SAMPLE by POLARIZED LIGHT MICROSCOPY and TRANSMISSION ELECTRON MICROSCOPY

Client:	**Hudson River Valley Environmental LLC**	Contract:	**Tech City**	**Metro Lab ID #:**	**B17060780**
Address:	350 Enterprise Drive	Client Job #:			
	Kingstone NY 12401	Location:			
	P: (845) 514-2551 F: (845) 581-5979		**Building #2**	Sample Received:	06/30/2017
				PLM Analysis Date:	06/30/2017
Contact:	**Kristofer S Landell**	Sampled By:	R.T.	TEM Analysis Date:	06/30/2017
	M: (845) 514-2551	Sampled Date:	06/28/2017	Amended By:	Tasheena Peel
	E: kris@hrvenv.com	Turnaround Time:	6 hrs	Amended Date:	07/10/2017

Summary of Analysis

LAB ID #	Client Sample #	Sample Description	Test	Fibrous Material	Non-Fibrous Material	Asbestos	Total Asbestos
11	4-TILE	Brown Homogenous NOB PILE #1 - WEST SIDE	NY ELAP 198.1 NY ELAP 198.6 NY ELAP 198.4			Inconclusive None Detected	None Detected
12	5-DEBRIS	Beige / White Inhomogenous Cementitious PILE #1 - MISC DEBRIS	NY ELAP 198.1 NY ELAP 198.6 NY ELAP 198.4		100% Non-Fibrous	None Detected	
13	6-DEBRIS	Brown / Grey Inhomogenous Fibrous PILE #2 - NORTH SIDE	NY ELAP 198.1 NY ELAP 198.6 NY ELAP 198.4	30% Cellulose 15% Fiberglass	50% Non-Fibrous 5% Vermiculite	Analysis Halted	
14	7-DEBRIS	Brown / Grey Inhomogenous Fibrous PILE #2 - SOUTH SIDE	NY ELAP 198.1 NY ELAP 198.6 NY ELAP 198.4	35% Cellulose 20% Fiberglass	42% Non-Fibrous 3% Vermiculite	Analysis Halted	
15	7-ELCTRC WIRE INS	Multi Homogenous NOB PILE #2 - SOUTH SIDE	NY ELAP 198.1 NY ELAP 198.6 NY ELAP 198.4			Inconclusive None Detected	None Detected
16	8-DEBRIS	Brown / Grey Inhomogenous Fibrous PILE #2 - EAST SIDE	NY ELAP 198.1 NY ELAP 198.6 NY ELAP 198.4	25% Cellulose 10% Fiberglass	60% Non-Fibrous 5% Vermiculite	Analysis Halted	
17	8-ELCTRC WIRE INS	Homogenous NOB PILE #2 - EAST SIDE	NY ELAP 198.1 NY ELAP 198.6 NY ELAP 198.4			Inconclusive None Detected	None Detected
18	9-DEBRIS	Brown / Grey Inhomogenous Fibrous PILE #2 - WEST SIDE	NY ELAP 198.1 NY ELAP 198.6 NY ELAP 198.4	25% Cellulose 20% Fiberglass	50% Non-Fibrous 5% Vermiculite	Analysis Halted	
19	10-TILE	Brown Homogenous NOB PILE #2 - MISC DEBRIS	NY ELAP 198.1 NY ELAP 198.6 NY ELAP 198.4			Inconclusive None Detected	None Detected
20	11-DEBRIS	Brown / Grey Inhomogenous Fibrous PILE #3 - NORTH SIDE	NY ELAP 198.1 NY ELAP 198.6 NY ELAP 198.4	25% Cellulose 10% Fiberglass	62% Non-Fibrous 3% Vermiculite	Analysis Halted	

Comments: Samples 1 through 9,11,12, 13,14 analysis was terminated due to the presence of vermiculite. Results are inconclusive and must go for 198.8 method for further verification

Zlatan Dimitrijevic
Laboratory Director

Michael Isaac Youssef Ibrahim
Mike Isaac / Youssef Ibrahim
PLM Analyst

Moe Soliman
TEM Analyst

NYS ELAP ID # 12003

NVLAP Lab Code: 500081-0

METRO ANALYTICAL LABORATORIES
255 West 36th St., Suite #101
New York, NY 10018
p: (212) 695-0165 f: (212) 695-0183

ASBESTOS ANALYSIS of BULK SAMPLE by POLARIZED LIGHT MICROSCOPY and TRANSMISSION ELECTRON MICROSCOPY

Client:	**Hudson River Valley Environmental LLC**	Contract:	**Tech City**	**Metro Lab ID #:**	**B17060780**
Address:	350 Enterprise Drive	Client Job #:			
	Kingstone NY 12401	Location:			
	P: (845) 514-2551 F: (845) 581-5979		**Building #2**	Sample Received:	06/30/2017
				PLM Analysis Date:	06/30/2017
Contact:	**Kristofer S Landell**	Sampled By:	R.T.	TEM Analysis Date:	06/30/2017
	M: (845) 514-2551	Sampled Date:	06/28/2017	Amended By:	Tasheena Peel
	E: kris@hrvenv.com	Turnaround Time:	6 hrs	Amended Date:	07/10/2017

Summary of Analysis

LAB ID #	Client Sample #	Sample Description	Test	Fibrous Material	Non-Fibrous Material	Asbestos	Total Asbestos
21	11-BEIGE TILE	Beige Homogenous NOB PILE #3 - NORTH SIDE	NY ELAP 198.1 NY ELAP 198.6 NY ELAP 198.4			 Inconclusive None Detected None Detected	
22	11-BROWN TILE	Brown Homogenous NOB PILE #3 - NORTH SIDE	NY ELAP 198.1 NY ELAP 198.6 NY ELAP 198.4			 Inconclusive None Detected None Detected	
23	12-DEBRIS	Brown / Grey Inhomogenous Fibrous PILE #3 - SOUTH SIDE	NY ELAP 198.1 NY ELAP 198.6 NY ELAP 198.4	20% Cellulose 15% Fiberglass	60% Non-Fibrous 5% Vermiculite	 Analysis Halted	
24	12-BEIGE TILE	Beige Homogenous NOB PILE #3 - SOUTH SIDE	NY ELAP 198.1 NY ELAP 198.6 NY ELAP 198.4			 Inconclusive None Detected None Detected	
25	12-BROWN BOARD	Brown Homogenous NOB PILE #3 - SOUTH SIDE	NY ELAP 198.1 NY ELAP 198.6 NY ELAP 198.4			 Inconclusive None Detected None Detected	
26	13-DEBRIS	Brown Homogenous Granular PILE #3 - EAST SIDE	NY ELAP 198.1 NY ELAP 198.6 NY ELAP 198.4	4% Cellulose 4% Fiberglass	90% Non-Fibrous 2% Vermiculite	 Analysis Halted	
27	13-BROWN TILE	Brown Homogenous NOB PILE #3 - EAST SIDE	NY ELAP 198.1 NY ELAP 198.6 NY ELAP 198.4			 Inconclusive None Detected None Detected	
28	13-BEIGE TILE	Beige Homogenous NOB PILE #3 - EAST SIDE	NY ELAP 198.1 NY ELAP 198.6 NY ELAP 198.4			 Inconclusive None Detected None Detected	
29	14-DEBRIS	Brown / Grey Inhomogenous Fibrous PILE #3 - WEST SIDE	NY ELAP 198.1 NY ELAP 198.6 NY ELAP 198.4	20% Cellulose 10% Fiberglass	65% Non-Fibrous 5% Vermiculite	 Analysis Halted	
30	14-BACK RUBBER	Black Homogenous NOB PILE #3 - WEST SIDE	NY ELAP 198.1 NY ELAP 198.6 NY ELAP 198.4			 Inconclusive None Detected None Detected	

Comments: Samples 1 through 9,11,12, 13,14 analysis was terminated due to the presence of vermiculite. Results are inconclusive and must go for 198.8 method for further verification

Zlatan Dimitrijevic
Laboratory Director

Michael Isaac Youssef Ibrahim
Mike Isaac / Youssef Ibrahim
PLM Analyst

Moe Soliman
TEM Analyst

NYS ELAP ID # 12003

NVLAP Lab Code: 500081-0

METRO ANALYTICAL LABORATORIES
255 West 36th St., Suite #101
New York, NY 10018
p: (212) 695-0165 f: (212) 695-0183

ASBESTOS ANALYSIS of BULK SAMPLE by POLARIZED LIGHT MICROSCOPY and TRANSMISSION ELECTRON MICROSCOPY

Client:	**Hudson River Valley Environmental LLC**	Contract:	**Tech City**	**Metro Lab ID #:**	**B17060780**
Address:	350 Enterprise Drive	Client Job #:			
	Kingstone NY 12401	Location:			
	P: (845) 514-2551 F: (845) 581-5979		**Building #2**	Sample Received:	06/30/2017
				PLM Analysis Date:	06/30/2017
Contact:	**Kristofer S Landell**	Sampled By:	R.T.	TEM Analysis Date:	06/30/2017
	M: (845) 514-2551	Sampled Date:	06/28/2017	Amended By:	Tasheena Peel
	E: kris@hrvenv.com	Turnaround Time:	6 hrs	Amended Date:	07/10/2017

Summary of Analysis

LAB ID #	Client Sample #	Sample Description	Test	Fibrous Material	Non-Fibrous Material	Asbestos	Total Asbestos
31	14-BEIGE TILE	Beige Homogenous NOB PILE #3 - WEST SIDE	NY ELAP 198.1 NY ELAP 198.6 NY ELAP 198.4			 Inconclusive None Detected	None Detected
32	15-BEIGE TILE	Homogenous NOB PILE #3 - MISC DEBRIS	NY ELAP 198.1 NY ELAP 198.6 NY ELAP 198.4			 Inconclusive None Detected	None Detected

Comments: Samples 1 through 9,11,12, 13,14 analysis was terminated due to the presence of vermiculite. Results are inconclusive and must go for 198.8 method for further verification

Zlatan Dimitrijevic
Laboratory Director

Mike Isaac / Youssef Ibrahim
PLM Analyst

Moe Soliman
TEM Analyst

NYS ELAP ID # 12003

NVLAP Lab Code: 500081-0

METRO ANALYTICAL LABORATORIES
255 West 36th St., Suite #101
New York, NY 10018
p: (212) 695-0165 f: (212) 695-0183

Report Notes

General Notes and Disclaimers

• The samples analyzed in this report were not collected by this laboratory - they were received from the client, or an agent of the client, in good condition, unless otherwise noted.

• All results are calculated based on client-provided measurements.

• The report shall not be reproduced, except in full, without the written approval of the laboratory.

• This report relates only to the samples tested. It may not be used by the client to claim project endorsement by NVLAP, NYS ELAP, or any other government agency.

• All samples will be properly disposed of after 60 days.

• Quality Control data (including 95% confidence limits, laboratory / analysis accuracy and precision) is available upon request.

Notes Regarding Asbestos Testing

• Air Sample Analysis by Phase Contrast Microscopy (PCM) adheres to Method NIOSH-7400. Results < 7 fibers / mm^2 are statistically insignificant.

• Percentages are calculated using the EPA equivalent Stratified Point-Count Method.

• Bulk Sample Analysis by Polarized Light Microscopy (PLM) Friable adheres to EPA/600/M4-082-20 or NYS ELAP 198.1.

• Bulk Sample Analysis by Polarized Light Microscopy (PLM) NOB adheres to NYS ELAP 198.6. This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.

• All inhomogeneous layers of the bulk samples were analyzed separately.

• Analytical results are sometimes based on the residue percentage(s) provided by the client along with the filters. Trace denotes asbestos detected at < 1%. Smiliarly, samples below quantitation limit (RL) are reported with a less than sign (<).

• Polarized Light Microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Quantitative TEM is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos containing.

• Bulk Sample Analysis by Transmission Electron Microscopy (TEM) NOB adheres to NYS ELAP Method 198.4.

• Air Sample Analysis by Transmission Electron Microscopy (TEM) adheres to Method EPA CFR Part 763 Final Rule (AHERA).

• Air Sample Analysis by Transmission Electron Microscopy (TEM) Worksheets are available upon request.

"RUSH" B17060780

Hudson River Valley Environmental, LLC
350 Enterprise Drive
Kingston, NY 12401
Phone: (845) 514-2551
Fax: (845) 481-5979
hrvenv@hrvenv.com
www.hrvenv.com

Bulk Sample Chain of Custody

Project Name:		Inspector:	Date:
Building #2 Tech City		Randy Turk	6/28/17
Project Number:	**Report Number:**	**Client:**	**Client Contact:**
		~~Tech City Plot~~	

LAB ID #	FIELD ID #	SAMPLE DESCRIPTION	CONDITION	COLOR	QUANTITY	SAMPLE TYPE
	1	Pile #1 North Side	Intact	Grey	1	NOB
	2	" " South Side			1	
	3	" " EAST Side			1	
	4	" " West Side			1	
	5	" " Misc Debris			1	
	6	Pile #2 North Side			1	
	7	" " South Side			1	
	8	" " EAST Side			1	
	9	" " West Side			1	
	10	" " Misc Debris			1	

Bulk Chain of Custody	Print Name	Signature	Date	Time
Sampled by:	RANDY TURK		6/28/17	1700
Relinquished by:	RANDY TURK		6/28/17	1730
Received by:	S. Ivy		6/30/17	10:37am

Turnaround Requested	Rush	24 Hour	48 Hour	72 Hour	5 Days	Other:
	○					

Positive Stop All Samples

HUDSON RIVER VALLEY ENVIRONMENTAL, LLC

Hudson River Valley Environmental, LLC
350 Enterprise Drive
Kingston, NY 12401
Phone: (845) 514-2551
Fax: (845) 481-5979
hrvenv@hrvenv.com
www.hrvenv.com

Rush B1706078O

Bulk Sample Chain of Custody

Project Name: Building #2 Tech City		Inspector: Randy Turk	Date: 6/28/17
Project Number:	Report Number:	Client:	Client Contact:

LAB ID #	FIELD ID #	SAMPLE DESCRIPTION	CONDITION	COLOR	QUANTITY	SAMPLE TYPE
	11	Pile #3 North Side	INTACT	GRY	1	NOB
	12	" " South Side	↓	↓	1	↓
	13	" " EAST Side			1	
	14	" " West Side			1	
	15	" " Misc Debris			1	

Bulk Chain of Custody	Print Name	Signature	Date	Time
Sampled by:	RANDY TURK		6/28/17	1700
Relinquished by:	RANDY TURK		6/28/17	1730
Received by:	S. Ivyo		6/30/17	10:37am

Turnaround Requested							
	Rush	24 Hour	48 Hour	72 Hour	5 Days	Other:	Positive Stop All Samples

South

CASE NARRATIVE

AMBIENT GROUP, INC.

Metro Analytical Laboratories
255 West 36th Street Suite 101
New York, NY 10018

Order#: **AGL49334**
Project: **Bulk SM-V**

The following samples were received as indicated below and on the attached Chain of Custody record. All analyses were performed within the holding time and with acceptable quality control results unless otherwise noted.

SAMPLE ID	LAB ID	MATRIX	Date Collected	Date Received
1	0493340-01	BULK	06/28/2017	07/03/2017
2	0493340-02	BULK	06/28/2017	07/03/2017
3	0493340-03	BULK	06/28/2017	07/03/2017
4	0493340-04	BULK	06/28/2017	07/03/2017
5	0493340-05	BULK	06/28/2017	07/03/2017
6	0493340-06	BULK	06/28/2017	07/03/2017
7	0493340-07	BULK	06/28/2017	07/03/2017
8	0493340-08	BULK	06/28/2017	07/03/2017
9	0493340-09	BULK	06/28/2017	07/03/2017
11	0493340-10	BULK	06/28/2017	07/03/2017
12	0493340-11	BULK	06/28/2017	07/03/2017
13	0493340-12	BULK	06/28/2017	07/03/2017
14	0493340-13	BULK	06/28/2017	07/03/2017

Surfacing Material containing Vermiculite (SM-V) is analyzed by NYS ELAP Method 198.8.

The enclosed results of analyses are representative of the samples as received by the laboratory. Ambient Group makes no representations or certifications as to the methods of sample collection, sample identification, or transportation handling procedures used prior to our receipt of samples. To the best of my knowledge, the information contained in this report is accurate and complete.

Approved By: _____ Date: Qing Zhao 2017.07.07 09:40:45 -04'00'

Ambient Group, Inc.

Ambient Group, Inc. **470 7th Avenue 12th Floor** **New York, New York 10018** **(212) 944-4615 Fax (212)944-4618** **NYS ELAP ID # 12009**			**AGL#:**	49334	
	Collected By:	Client Submitted			
	Date Collected:	6/28/2017	Client Name:	Metro Analytical Laboratories	
	Date Received:	7/3/2017			
	Date Analyzed:	7/6/2017	Client Address:	255 West 36th Street Suite 101, NY 10018	
	Matrix:	SM-V			
	Job #:				

REPORT OF LABORATORY RESULTS

Job Location: **Building #2 Tech City**

Analyst Name: Qing Zhao

Method: Determination of Asbestos in Vermiculite-containing Surfacing Material - NYS ELAP Item No. 198.8

AGL # Field ID	Sample Description/Location	Color	Non-Asbestos Fibers Observed	Weight Percent Chrysotile	Weight Percent Amphibole	% Total Asbestos
49334-01 1	Pile #1 North Side	Grey	Fibrous Glass/Cellulose	ND	ND	**ND**
49334-02 2	Pile #1 South Side	Grey	Fibrous Glass/Cellulose	ND	ND	**ND**
49334-03 3	Pile #1 East Side	Grey	Fibrous Glass/Cellulose	ND	ND	**ND**
49334-04 4	Pile #1 West Side	Grey	Fibrous Glass/Cellulose	ND	ND	**ND**
49334-05 5	Pile #1 Misc Debris	Grey	Fibrous Glass/Cellulose	ND	ND	**ND**
49334-06 6	Pile #2 North Side	Grey	Fibrous Glass/Cellulose	ND	ND	**ND**
49334-07 7	Pile #2 South Side	Grey	Fibrous Glass/Cellulose	ND	ND	**ND**
49334-08 8	Pile #2 East Side	Grey	Fibrous Glass/Cellulose	ND	ND	**ND**
49334-09 9	Pile #2 West Side	Grey	Fibrous Glass/Cellulose	ND	ND	**ND**

Ambient Group, Inc. **470 7th Avenue 12th Floor** **New York, New York 10018** **(212) 944-4615 Fax (212)944-4618** **NYS ELAP ID # 12009**	Collected By:	Client Submitted	ambient group inc.	**AGL#:**	49334
	Date Collected:	6/28/2017		Client Name:	Metro Analytical Laboratories
	Date Received:	7/3/2017		Client Address:	255 West 36th Street Suite 101, NY 10018
	Date Analyzed:	7/6/2017			
	Matrix:	SM-V			
	Job #:				

REPORT OF LABORATORY RESULTS

Job Location: **Building #2 Tech City**

Analyst Name: Qing Zhao

Method: Determination of Asbestos in Vermiculite-containing Surfacing Material - NYS ELAP Item No. 198.8

AGL # Field ID	Sample Description/Location	Color	Non-Asbestos Fibers Observed	Weight Percent Chrysotile	Weight Percent Amphibole	% Total Asbestos
49334-10 11	Pile #3 North Side	Grey	Fibrous Glass/Cellulose	ND	ND	**ND**
49334-11 12	Pile #3 South Side	Grey	Fibrous Glass/Cellulose	ND	ND	**ND**
49334-12 13	Pile #3 East Side	Grey	Fibrous Glass/Cellulose	ND	ND	**ND**
49334-13 14	Pile #3 West Side	Grey	Fibrous Glass/Cellulose	ND	ND	**ND**
Report Approved by:	**Qing Zhao**					
Signature:	Qing Zhao 2017.07.07 09:41:03 -04'00'		**Date: 7/7/2017**			

DETERMINATION OF ASBESTOS IN VERMICULITE-CONTAINING SURFACING MATERIAL

Sample Description	Weight of Sub-Sample (g)	Weight Percent Organic and Water	Weight Percent Floats	Weight Percent Acid-Soluble	Weight Percent Residue	Weight Percent Centrifugate	Percent Chrysotile	Percent Amphibole	Percent Total Asbestos
Pile #1 North Side Pile #1 North Side 1	3.0987	14.6965	1.9040	45.5449	37.8546	1.5125	ND	ND	ND
Pile #1 South Side Pile #1 South Side 2	3.0144	31.7377	0.3848	35.9873	31.8903	1.1768	ND	ND	ND
Pile #1 East Side Pile #1 East Side 3	3.7750	15.6901	0.1828	47.5841	36.5430	1.4283	ND	ND	ND
Pile #1 West Side Pile #1 West Side 4	3.0403	24.2443	0.0559	44.7851	30.9147	1.4381	ND	ND	ND
Pile #1 Misc Debris Pile #1 Misc Debris 5	3.1098	24.4003	0.9004	43.0992	31.6001	1.1760	ND	ND	ND
Pile #2 North Side Pile #2 North Side 6	3.1654	19.1856	1.5417	44.2219	35.0509	1.1519	ND	ND	ND
Pile #2 South Side Pile #2 South Side 7	3.0952	18.1022	0.1583	35.8652	45.8743	1.7384	ND	ND	ND
Pile #2 East Side Pile #2 East Side 8	3.3694	21.3925	0.0920	42.5091	36.0064	1.3851	ND	ND	ND
Pile #2 West Side Pile #2 West Side 9	3.0056	26.4040	0.2562	29.9208	43.4190	2.7743	ND	ND	ND

DETERMINATION OF ASBESTOS IN VERMICULITE-CONTAINING SURFACING MATERIAL

Sample Description	Weight of Sub-Sample (g)	Weight Percent Organic and Water	Weight Percent Floats	Weight Percent Acid-Soluble	Weight Percent Residue	Weight Percent Centrifugate	Percent Chrysotile	Percent Amphibole	Percent Total Asbestos
Pile #3 North Side Pile #3 North Side 11	3.2737	17.4420	1.2738	40.7093	40.5749	2.3447	ND	ND	ND
Pile #3 South Side Pile #3 South Side 12	3.0916	15.0569	1.7337	45.7368	37.4725	2.4798	ND	ND	ND
Pile #3 East Side Pile #3 East Side 13	3.3106	36.9993	0.3564	29.0310	33.6132	1.7714	ND	ND	ND
Pile #3 West Side Pile #3 West Side 14	3.4461	21.5490	1.4712	40.8520	36.1278	1.3420	ND	ND	ND

DETERMINATION OF ASBESTOS IN VERMICULITE-CONTAINING SURFACING MATERIAL

SAMPLE:	Pile #1 North Side	**SAMPLE #:**	49334-01
	Pile #1 North Side	**DATE:**	7/6/17
	1	**ANALYST:**	QZ

INITIAL WEIGHTS		**Comments**
Weight of Crucible	38.2278	
Weight of Crucible + Sub Sample	41.3265	
Weight of Sub-Sample	3.0987	No chrysotile detected in sample. Percent chrysotile in sample is less than the limit of detection for chrysotile in this analysis (0.0946%)
ASHING		
Weight of Crucible + Ash	40.8711	
Weight of Ash	2.6433	
Weight Loss During Ashing	0.4554	
Weight Percent Organic and Water	14.6965	
ACID TREATMENT/FLOATATION		No amphibole asbestos detected in sample. Percent amphibole asbestos in sample is less than the limit of detection for amphibole asbestos in this analysis (0.0038%)
Weight of Dish for Floats	6.6685	
Weight of Dish + Floats	6.7275	
Weight of Floats	0.0590	
Weight Percent Floats	1.9040	
Weight of Dish + Filter for Residue	6.6616	
Weight of Dish + Fliter + Residue	7.8346	
Weight of Residue	1.1730	
Weight Loss During Acid Treatment	1.4113	
Weight Percent Acid-Soluble Materials	45.5449	
Weight Percent Residue	37.8546	

PLM EXAMINATION OF RESIDUE (CHRYSOTILE)		**Chrysotile Point Counts (Chrysotile/Other)**					
Point Count: Number of Occupied Points	400	Slide 1:	0	50	Slide 5:	0	50
Number of Chrysotile Points	0	Slide 2:	0	50	Slide 6:	0	50
		Slide 3:	0	50	Slide 7:	0	50
PERCENT CHRYSOTILE IN SAMPLE	ND	Slide 4:	0	50	Slide 8:	0	50

HEAVY LIQUID CENTRIFUGATION	
Weight of Dish + Filter + Balance of Residue	7.7678
Weight of Balance of Residue	1.1062
Weight of Dish + Filter for Centrifugate	6.6669
Weight of Dish + Filter + Centrifugate	6.7111
Weight of Centrifugate	0.0442
Weight Percent Centrifugate	1.5125

PLM EXAMINATION OF CENTRIFUGATE (AMPHIBOLE)		**Amphibole Asbestos Point Counts (Amphibole/Other)**					
Point Count: Number of Occupied Points	400	Slide 1:	0	50	Slide 5:	0	50
Number of Amphibole Points	0	Slide 2:	0	50	Slide 6:	0	50
		Slide 3:	0	50	Slide 7:	0	50
PERCENT AMPHIBOLE ASBESTOS IN SAMPLE	ND	Slide 4:	0	50	Slide 8:	0	50
PERCENT TOTAL ASBESTOS IN SAMPLE	ND						

DETERMINATION OF ASBESTOS IN VERMICULITE-CONTAINING SURFACING MATERIAL

SAMPLE:	Pile #1 South Side	**SAMPLE #:**	49334-02
	Pile #1 South Side	**DATE:**	7/6/17
	2	**ANALYST:**	QZ

INITIAL WEIGHTS		**Comments**
Weight of Crucible	33.7967	
Weight of Crucible + Sub Sample	36.8111	
Weight of Sub-Sample	3.0144	No chrysotile detected in sample. Percent chrysotile in sample is less than the limit of detection for chrysotile in this analysis (0.0797%)
ASHING		
Weight of Crucible + Ash	35.8544	
Weight of Ash	2.0577	
Weight Loss During Ashing	0.9567	
Weight Percent Organic and Water	31.7377	
ACID TREATMENT/FLOATATION		No amphibole asbestos detected in sample. Percent amphibole asbestos in sample is less than the limit of detection for amphibole asbestos in this analysis (0.0029%)
Weight of Dish for Floats	6.6693	
Weight of Dish + Floats	6.6809	
Weight of Floats	0.0116	
Weight Percent Floats	0.3848	
Weight of Dish + Filter for Residue	6.7010	
Weight of Dish + Fliter + Residue	7.6623	
Weight of Residue	0.9613	
Weight Loss During Acid Treatment	1.0848	
Weight Percent Acid-Soluble Materials	35.9873	
Weight Percent Residue	31.8903	

PLM EXAMINATION OF RESIDUE (CHRYSOTILE)		**Chrysotile Point Counts (Chrysotile/Other)**					
Point Count: Number of Occupied Points	400	Slide 1:	0	50	Slide 5:	0	50
Number of Chrysotile Points	0	Slide 2:	0	50	Slide 6:	0	50
		Slide 3:	0	50	Slide 7:	0	50
PERCENT CHRYSOTILE IN SAMPLE	ND	Slide 4:	0	50	Slide 8:	0	50

HEAVY LIQUID CENTRIFUGATION	
Weight of Dish + Filter + Balance of Residue	7.6413
Weight of Balance of Residue	0.9403
Weight of Dish + Filter for Centrifugate	6.6581
Weight of Dish + Filter + Centrifugate	6.6928
Weight of Centrifugate	0.0347
Weight Percent Centrifugate	1.1768

PLM EXAMINATION OF CENTRIFUGATE (AMPHIBOLE)		**Amphibole Asbestos Point Counts (Amphibole/Other)**					
Point Count: Number of Occupied Points	400	Slide 1:	0	50	Slide 5:	0	50
Number of Amphibole Points	0	Slide 2:	0	50	Slide 6:	0	50
		Slide 3:	0	50	Slide 7:	0	50
PERCENT AMPHIBOLE ASBESTOS IN SAMPLE	ND	Slide 4:	0	50	Slide 8:	0	50
PERCENT TOTAL ASBESTOS IN SAMPLE	ND						

DETERMINATION OF ASBESTOS IN VERMICULITE-CONTAINING SURFACING MATERIAL

SAMPLE:	Pile #1 East Side	**SAMPLE #:**	49334-03
	Pile #1 East Side	**DATE:**	7/6/17
	3	**ANALYST:**	QZ

INITIAL WEIGHTS		**Comments**
Weight of Crucible	35.5634	
Weight of Crucible + Sub Sample	39.3384	
Weight of Sub-Sample	3.7750	No chrysotile detected in sample. Percent chrysotile in sample is less than the limit of detection for chrysotile in this analysis (0.0914%)
ASHING		
Weight of Crucible + Ash	38.7461	
Weight of Ash	3.1827	
Weight Loss During Ashing	0.5923	
Weight Percent Organic and Water	15.6901	No amphibole asbestos detected in sample. Percent amphibole asbestos in sample is less than the limit of detection for amphibole asbestos in this analysis (0.0036%)
ACID TREATMENT/FLOATATION		
Weight of Dish for Floats	6.6839	
Weight of Dish + Floats	6.6908	
Weight of Floats	0.0069	
Weight Percent Floats	0.1828	
Weight of Dish + Filter for Residue	6.7017	
Weight of Dish + Fliter + Residue	8.0812	
Weight of Residue	1.3795	
Weight Loss During Acid Treatment	1.7963	
Weight Percent Acid-Soluble Materials	47.5841	
Weight Percent Residue	36.5430	

PLM EXAMINATION OF RESIDUE (CHRYSOTILE)		**Chrysotile Point Counts (Chrysotile/Other)**					
Point Count: Number of Occupied Points	400	Slide 1:	0	50	Slide 5:	0	50
Number of Chrysotile Points	0	Slide 2:	0	50	Slide 6:	0	50
		Slide 3:	0	50	Slide 7:	0	50
PERCENT CHRYSOTILE IN SAMPLE	ND	Slide 4:	0	50	Slide 8:	0	50

HEAVY LIQUID CENTRIFUGATION	
Weight of Dish + Filter + Balance of Residue	8.0500
Weight of Balance of Residue	1.3483
Weight of Dish + Filter for Centrifugate	6.6645
Weight of Dish + Filter + Centrifugate	6.7172
Weight of Centrifugate	0.0527
Weight Percent Centrifugate	1.4283

PLM EXAMINATION OF CENTRIFUGATE (AMPHIBOLE)		**Amphibole Asbestos Point Counts (Amphibole/Other)**					
Point Count: Number of Occupied Points	400	Slide 1:	0	50	Slide 5:	0	50
Number of Amphibole Points	0	Slide 2:	0	50	Slide 6:	0	50
		Slide 3:	0	50	Slide 7:	0	50
PERCENT AMPHIBOLE ASBESTOS IN SAMPLE	ND	Slide 4:	0	50	Slide 8:	0	50
PERCENT TOTAL ASBESTOS IN SAMPLE	ND						

DETERMINATION OF ASBESTOS IN VERMICULITE-CONTAINING SURFACING MATERIAL

SAMPLE:	Pile #1 West Side	**SAMPLE #:**	49334-04
	Pile #1 West Side	**DATE:**	7/6/17
	4	**ANALYST:**	QZ

INITIAL WEIGHTS		**Comments**
Weight of Crucible	34.8419	
Weight of Crucible + Sub Sample	37.8822	
Weight of Sub-Sample	3.0403	No chrysotile detected in sample. Percent chrysotile in sample is less than the limit of detection for chrysotile in this analysis (0.0773%)
ASHING		
Weight of Crucible + Ash	37.1451	
Weight of Ash	2.3032	
Weight Loss During Ashing	0.7371	
Weight Percent Organic and Water	24.2443	
ACID TREATMENT/FLOATATION		No amphibole asbestos detected in sample. Percent amphibole asbestos in sample is less than the limit of detection for amphibole asbestos in this analysis (0.0036%)
Weight of Dish for Floats	6.6528	
Weight of Dish + Floats	6.6545	
Weight of Floats	0.0017	
Weight Percent Floats	0.0559	
Weight of Dish + Filter for Residue	6.6821	
Weight of Dish + Fliter + Residue	7.6220	
Weight of Residue	0.9399	
Weight Loss During Acid Treatment	1.3616	
Weight Percent Acid-Soluble Materials	44.7851	
Weight Percent Residue	30.9147	

PLM EXAMINATION OF RESIDUE (CHRYSOTILE)		**Chrysotile Point Counts (Chrysotile/Other)**					
Point Count: Number of Occupied Points	400	Slide 1:	0	50	Slide 5:	0	50
Number of Chrysotile Points	0	Slide 2:	0	50	Slide 6:	0	50
		Slide 3:	0	50	Slide 7:	0	50
PERCENT CHRYSOTILE IN SAMPLE	ND	Slide 4:	0	50	Slide 8:	0	50

HEAVY LIQUID CENTRIFUGATION	
Weight of Dish + Filter + Balance of Residue	7.5463
Weight of Balance of Residue	0.8642
Weight of Dish + Filter for Centrifugate	6.6583
Weight of Dish + Filter + Centrifugate	6.6985
Weight of Centrifugate	0.0402
Weight Percent Centrifugate	1.4381

PLM EXAMINATION OF CENTRIFUGATE (AMPHIBOLE)		**Amphibole Asbestos Point Counts (Amphibole/Other)**					
Point Count: Number of Occupied Points	400	Slide 1:	0	50	Slide 5:	0	50
Number of Amphibole Points	0	Slide 2:	0	50	Slide 6:	0	50
		Slide 3:	0	50	Slide 7:	0	50
PERCENT AMPHIBOLE ASBESTOS IN SAMPLE	ND	Slide 4:	0	50	Slide 8:	0	50
PERCENT TOTAL ASBESTOS IN SAMPLE	ND						

DETERMINATION OF ASBESTOS IN VERMICULITE-CONTAINING SURFACING MATERIAL

SAMPLE:	Pile #1 Misc Debris	**SAMPLE #:**	49334-05
	Pile #1 Misc Debris	**DATE:**	7/6/17
	5	**ANALYST:**	QZ

INITIAL WEIGHTS		**Comments**
Weight of Crucible	34.2213	
Weight of Crucible + Sub Sample	37.3311	
Weight of Sub-Sample	3.1098	No chrysotile detected in sample. Percent chrysotile in sample is less than the limit of detection for chrysotile in this analysis (0.0790%)
ASHING		
Weight of Crucible + Ash	36.5723	
Weight of Ash	2.3510	
Weight Loss During Ashing	0.7588	
Weight Percent Organic and Water	24.4003	
ACID TREATMENT/FLOATATION		No amphibole asbestos detected in sample. Percent amphibole asbestos in sample is less than the limit of detection for amphibole asbestos in this analysis (0.0029%)
Weight of Dish for Floats	6.6678	
Weight of Dish + Floats	6.6958	
Weight of Floats	0.0280	
Weight Percent Floats	0.9004	
Weight of Dish + Filter for Residue	6.6852	
Weight of Dish + Fliter + Residue	7.6679	
Weight of Residue	0.9827	
Weight Loss During Acid Treatment	1.3403	
Weight Percent Acid-Soluble Materials	43.0992	
Weight Percent Residue	31.6001	

PLM EXAMINATION OF RESIDUE (CHRYSOTILE)		**Chrysotile Point Counts (Chrysotile/Other)**					
Point Count: Number of Occupied Points	400	Slide 1:	0	50	Slide 5:	0	50
Number of Chrysotile Points	0	Slide 2:	0	50	Slide 6:	0	50
		Slide 3:	0	50	Slide 7:	0	50
PERCENT CHRYSOTILE IN SAMPLE	ND	Slide 4:	0	50	Slide 8:	0	50

HEAVY LIQUID CENTRIFUGATION	
Weight of Dish + Filter + Balance of Residue	7.6391
Weight of Balance of Residue	0.9539
Weight of Dish + Filter for Centrifugate	6.6688
Weight of Dish + Filter + Centrifugate	6.7043
Weight of Centrifugate	0.0355
Weight Percent Centrifugate	1.1760

PLM EXAMINATION OF CENTRIFUGATE (AMPHIBOLE)		**Amphibole Asbestos Point Counts (Amphibole/Other)**					
Point Count: Number of Occupied Points	400	Slide 1:	0	50	Slide 5:	0	50
Number of Amphibole Points	0	Slide 2:	0	50	Slide 6:	0	50
		Slide 3:	0	50	Slide 7:	0	50
PERCENT AMPHIBOLE ASBESTOS IN SAMPLE	ND	Slide 4:	0	50	Slide 8:	0	50
PERCENT TOTAL ASBESTOS IN SAMPLE	ND						

DETERMINATION OF ASBESTOS IN VERMICULITE-CONTAINING SURFACING MATERIAL

SAMPLE:	Pile #2 North Side	**SAMPLE #:**	49334-06
	Pile #2 North Side	**DATE:**	7/6/17
	6	**ANALYST:**	QZ

INITIAL WEIGHTS		**Comments**
Weight of Crucible	35.9180	
Weight of Crucible + Sub Sample	39.0834	
Weight of Sub-Sample	3.1654	No chrysotile detected in sample. Percent chrysotile in sample is less than the limit of detection for chrysotile in this analysis (0.0876%)
ASHING		
Weight of Crucible + Ash	38.4761	
Weight of Ash	2.5581	
Weight Loss During Ashing	0.6073	
Weight Percent Organic and Water	19.1856	
ACID TREATMENT/FLOATATION		No amphibole asbestos detected in sample. Percent amphibole asbestos in sample is less than the limit of detection for amphibole asbestos in this analysis (0.0029%)
Weight of Dish for Floats	6.6447	
Weight of Dish + Floats	6.6935	
Weight of Floats	0.0488	
Weight Percent Floats	1.5417	
Weight of Dish + Filter for Residue	6.6782	
Weight of Dish + Fliter + Residue	7.7877	
Weight of Residue	1.1095	
Weight Loss During Acid Treatment	1.3998	
Weight Percent Acid-Soluble Materials	44.2219	
Weight Percent Residue	35.0509	

PLM EXAMINATION OF RESIDUE (CHRYSOTILE)		**Chrysotile Point Counts (Chrysotile/Other)**					
Point Count: Number of Occupied Points	400	Slide 1:	0	50	Slide 5:	0	50
Number of Chrysotile Points	0	Slide 2:	0	50	Slide 6:	0	50
		Slide 3:	0	50	Slide 7:	0	50
PERCENT CHRYSOTILE IN SAMPLE	ND	Slide 4:	0	50	Slide 8:	0	50

HEAVY LIQUID CENTRIFUGATION	
Weight of Dish + Filter + Balance of Residue	7.7310
Weight of Balance of Residue	1.0528
Weight of Dish + Filter for Centrifugate	6.7109
Weight of Dish + Filter + Centrifugate	6.7455
Weight of Centrifugate	0.0346
Weight Percent Centrifugate	1.1519

PLM EXAMINATION OF CENTRIFUGATE (AMPHIBOLE)		**Amphibole Asbestos Point Counts (Amphibole/Other)**					
Point Count: Number of Occupied Points	400	Slide 1:	0	50	Slide 5:	0	50
Number of Amphibole Points	0	Slide 2:	0	50	Slide 6:	0	50
		Slide 3:	0	50	Slide 7:	0	50
PERCENT AMPHIBOLE ASBESTOS IN SAMPLE	ND	Slide 4:	0	50	Slide 8:	0	50
PERCENT TOTAL ASBESTOS IN SAMPLE	ND						

DETERMINATION OF ASBESTOS IN VERMICULITE-CONTAINING SURFACING MATERIAL

SAMPLE:	Pile #2 South Side	**SAMPLE #:**	49334-07
	Pile #2 South Side	**DATE:**	7/6/17
	7	**ANALYST:**	QZ

INITIAL WEIGHTS		**Comments**
Weight of Crucible	39.5510	
Weight of Crucible + Sub Sample	42.6462	
Weight of Sub-Sample	3.0952	No chrysotile detected in sample. Percent chrysotile in sample is less than the limit of detection for chrysotile in this analysis (0.1147%)
ASHING		
Weight of Crucible + Ash	42.0859	
Weight of Ash	2.5349	
Weight Loss During Ashing	0.5603	
Weight Percent Organic and Water	18.1022	
ACID TREATMENT/FLOATATION		No amphibole asbestos detected in sample. Percent amphibole asbestos in sample is less than the limit of detection for amphibole asbestos in this analysis (0.0043%)
Weight of Dish for Floats	6.6684	
Weight of Dish + Floats	6.6733	
Weight of Floats	0.0049	
Weight Percent Floats	0.1583	
Weight of Dish + Filter for Residue	6.6787	
Weight of Dish + Fliter + Residue	8.0986	
Weight of Residue	1.4199	
Weight Loss During Acid Treatment	1.1101	
Weight Percent Acid-Soluble Materials	35.8652	
Weight Percent Residue	45.8743	

PLM EXAMINATION OF RESIDUE (CHRYSOTILE)			**Chrysotile Point Counts (Chrysotile/Other)**					
Point Count: Number of Occupied Points	400	Slide 1:	0	50	Slide 5:	0	50
Number of Chrysotile Points	0	Slide 2:	0	50	Slide 6:	0	50
		Slide 3:	0	50	Slide 7:	0	50
PERCENT CHRYSOTILE IN SAMPLE	ND	Slide 4:	0	50	Slide 8:	0	50

HEAVY LIQUID CENTRIFUGATION	
Weight of Dish + Filter + Balance of Residue	8.0298
Weight of Balance of Residue	1.3511
Weight of Dish + Filter for Centrifugate	6.7266
Weight of Dish + Filter + Centrifugate	6.7778
Weight of Centrifugate	0.0512
Weight Percent Centrifugate	1.7384

PLM EXAMINATION OF CENTRIFUGATE (AMPHIBOLE)			**Amphibole Asbestos Point Counts (Amphibole/Other)**					
Point Count: Number of Occupied Points	400	Slide 1:	0	50	Slide 5:	0	50
Number of Amphibole Points	0	Slide 2:	0	50	Slide 6:	0	50
		Slide 3:	0	50	Slide 7:	0	50
PERCENT AMPHIBOLE ASBESTOS IN SAMPLE	ND	Slide 4:	0	50	Slide 8:	0	50

PERCENT TOTAL ASBESTOS IN SAMPLE	ND

DETERMINATION OF ASBESTOS IN VERMICULITE-CONTAINING SURFACING MATERIAL

SAMPLE:	Pile #2 East Side	**SAMPLE #:**	49334-08
	Pile #2 East Side	**DATE:**	7/6/17
	8	**ANALYST:**	QZ

INITIAL WEIGHTS		**Comments**
Weight of Crucible	34.3556	
Weight of Crucible + Sub Sample	37.7250	
Weight of Sub-Sample	3.3694	No chrysotile detected in sample. Percent chrysotile in sample is less than the limit of detection for chrysotile in this analysis (0.0900%)
ASHING		
Weight of Crucible + Ash	37.0042	
Weight of Ash	2.6486	
Weight Loss During Ashing	0.7208	
Weight Percent Organic and Water	21.3925	
ACID TREATMENT/FLOATATION		No amphibole asbestos detected in sample. Percent amphibole asbestos in sample is less than the limit of detection for amphibole asbestos in this analysis (0.0035%)
Weight of Dish for Floats	6.6511	
Weight of Dish + Floats	6.6542	
Weight of Floats	0.0031	
Weight Percent Floats	0.0920	
Weight of Dish + Filter for Residue	6.7030	
Weight of Dish + Fliter + Residue	7.9162	
Weight of Residue	1.2132	
Weight Loss During Acid Treatment	1.4323	
Weight Percent Acid-Soluble Materials	42.5091	
Weight Percent Residue	36.0064	

PLM EXAMINATION OF RESIDUE (CHRYSOTILE)			**Chrysotile Point Counts (Chrysotile/Other)**					
Point Count: Number of Occupied Points	400	Slide 1:	0	50	Slide 5:	0	50
Number of Chrysotile Points	0	Slide 2:	0	50	Slide 6:	0	50
		Slide 3:	0	50	Slide 7:	0	50
PERCENT CHRYSOTILE IN SAMPLE	ND	Slide 4:	0	50	Slide 8:	0	50

HEAVY LIQUID CENTRIFUGATION	
Weight of Dish + Filter + Balance of Residue	7.7766
Weight of Balance of Residue	1.0736
Weight of Dish + Filter for Centrifugate	6.7080
Weight of Dish + Filter + Centrifugate	6.7493
Weight of Centrifugate	0.0413
Weight Percent Centrifugate	1.3851

PLM EXAMINATION OF CENTRIFUGATE (AMPHIBOLE)			**Amphibole Asbestos Point Counts (Amphibole/Other)**					
Point Count: Number of Occupied Points	400	Slide 1:	0	50	Slide 5:	0	50
Number of Amphibole Points	0	Slide 2:	0	50	Slide 6:	0	50
		Slide 3:	0	50	Slide 7:	0	50
PERCENT AMPHIBOLE ASBESTOS IN SAMPLE	ND	Slide 4:	0	50	Slide 8:	0	50

PERCENT TOTAL ASBESTOS IN SAMPLE	ND

DETERMINATION OF ASBESTOS IN VERMICULITE-CONTAINING SURFACING MATERIAL

SAMPLE:	Pile #2 West Side	**SAMPLE #:**	49334-09
	Pile #2 West Side	**DATE:**	7/6/17
	9	**ANALYST:**	QZ

INITIAL WEIGHTS		**Comments**
Weight of Crucible	33.1755	
Weight of Crucible + Sub Sample	36.1811	
Weight of Sub-Sample	3.0056	No chrysotile detected in sample. Percent chrysotile in sample is less than the limit of detection for chrysotile in this analysis (0.1085%)
ASHING		
Weight of Crucible + Ash	35.3875	
Weight of Ash	2.2120	
Weight Loss During Ashing	0.7936	
Weight Percent Organic and Water	26.4040	
ACID TREATMENT/FLOATATION		No amphibole asbestos detected in sample. Percent amphibole asbestos in sample is less than the limit of detection for amphibole asbestos in this analysis (0.0069%)
Weight of Dish for Floats	6.6693	
Weight of Dish + Floats	6.6770	
Weight of Floats	0.0077	
Weight Percent Floats	0.2562	
Weight of Dish + Filter for Residue	6.6893	
Weight of Dish + Fliter + Residue	7.9943	
Weight of Residue	1.3050	
Weight Loss During Acid Treatment	0.8993	
Weight Percent Acid-Soluble Materials	29.9208	
Weight Percent Residue	43.4190	

PLM EXAMINATION OF RESIDUE (CHRYSOTILE)		**Chrysotile Point Counts (Chrysotile/Other)**					
Point Count: Number of Occupied Points	400	Slide 1:	0	50	Slide 5:	0	50
Number of Chrysotile Points	0	Slide 2:	0	50	Slide 6:	0	50
		Slide 3:	0	50	Slide 7:	0	50
PERCENT CHRYSOTILE IN SAMPLE	ND	Slide 4:	0	50	Slide 8:	0	50

HEAVY LIQUID CENTRIFUGATION	
Weight of Dish + Filter + Balance of Residue	7.8928
Weight of Balance of Residue	1.2035
Weight of Dish + Filter for Centrifugate	6.7249
Weight of Dish + Filter + Centrifugate	6.8018
Weight of Centrifugate	0.0769
Weight Percent Centrifugate	2.7743

PLM EXAMINATION OF CENTRIFUGATE (AMPHIBOLE)		**Amphibole Asbestos Point Counts (Amphibole/Other)**					
Point Count: Number of Occupied Points	400	Slide 1:	0	50	Slide 5:	0	50
Number of Amphibole Points	0	Slide 2:	0	50	Slide 6:	0	50
		Slide 3:	0	50	Slide 7:	0	50
PERCENT AMPHIBOLE ASBESTOS IN SAMPLE	ND	Slide 4:	0	50	Slide 8:	0	50
PERCENT TOTAL ASBESTOS IN SAMPLE	ND						

DETERMINATION OF ASBESTOS IN VERMICULITE-CONTAINING SURFACING MATERIAL

SAMPLE:	Pile #3 North Side	**SAMPLE #:**	49334-10
	Pile #3 North Side	**DATE:**	7/6/17
	11	**ANALYST:**	QZ

INITIAL WEIGHTS		**Comments**
Weight of Crucible	26.3477	
Weight of Crucible + Sub Sample	29.6214	
Weight of Sub-Sample	3.2737	No chrysotile detected in sample. Percent chrysotile in sample is less than the limit of detection for chrysotile in this analysis (0.1014%)
ASHING		
Weight of Crucible + Ash	29.0504	
Weight of Ash	2.7027	
Weight Loss During Ashing	0.5710	
Weight Percent Organic and Water	17.4420	
ACID TREATMENT/FLOATATION		No amphibole asbestos detected in sample. Percent amphibole asbestos in sample is less than the limit of detection for amphibole asbestos in this analysis (0.0059%)
Weight of Dish for Floats	6.6683	
Weight of Dish + Floats	6.7100	
Weight of Floats	0.0417	
Weight Percent Floats	1.2738	
Weight of Dish + Filter for Residue	6.7013	
Weight of Dish + Fliter + Residue	8.0296	
Weight of Residue	1.3283	
Weight Loss During Acid Treatment	1.3327	
Weight Percent Acid-Soluble Materials	40.7093	
Weight Percent Residue	40.5749	

PLM EXAMINATION OF RESIDUE (CHRYSOTILE)		**Chrysotile Point Counts (Chrysotile/Other)**					
Point Count: Number of Occupied Points	400	Slide 1:	0	50	Slide 5:	0	50
Number of Chrysotile Points	0	Slide 2:	0	50	Slide 6:	0	50
		Slide 3:	0	50	Slide 7:	0	50
PERCENT CHRYSOTILE IN SAMPLE	ND	Slide 4:	0	50	Slide 8:	0	50

HEAVY LIQUID CENTRIFUGATION	
Weight of Dish + Filter + Balance of Residue	7.9905
Weight of Balance of Residue	1.2892
Weight of Dish + Filter for Centrifugate	6.7108
Weight of Dish + Filter + Centrifugate	6.7853
Weight of Centrifugate	0.0745
Weight Percent Centrifugate	2.3447

PLM EXAMINATION OF CENTRIFUGATE (AMPHIBOLE)		**Amphibole Asbestos Point Counts (Amphibole/Other)**					
Point Count: Number of Occupied Points	400	Slide 1:	0	50	Slide 5:	0	50
Number of Amphibole Points	0	Slide 2:	0	50	Slide 6:	0	50
		Slide 3:	0	50	Slide 7:	0	50
PERCENT AMPHIBOLE ASBESTOS IN SAMPLE	ND	Slide 4:	0	50	Slide 8:	0	50
PERCENT TOTAL ASBESTOS IN SAMPLE	ND						

DETERMINATION OF ASBESTOS IN VERMICULITE-CONTAINING SURFACING MATERIAL

SAMPLE:	Pile #3 South Side	**SAMPLE #:**	49334-11
	Pile #3 South Side	**DATE:**	7/6/17
	12	**ANALYST:**	QZ

INITIAL WEIGHTS		**Comments**
Weight of Crucible	25.9759	
Weight of Crucible + Sub Sample	29.0675	
Weight of Sub-Sample	3.0916	No chrysotile detected in sample. Percent chrysotile in sample is less than the limit of detection for chrysotile in this analysis (0.0937%)
ASHING		
Weight of Crucible + Ash	28.6020	
Weight of Ash	2.6261	
Weight Loss During Ashing	0.4655	
Weight Percent Organic and Water	15.0569	
ACID TREATMENT/FLOATATION		No amphibole asbestos detected in sample. Percent amphibole asbestos in sample is less than the limit of detection for amphibole asbestos in this analysis (0.0062%)
Weight of Dish for Floats	6.6513	
Weight of Dish + Floats	6.7049	
Weight of Floats	0.0536	
Weight Percent Floats	1.7337	
Weight of Dish + Filter for Residue	6.6841	
Weight of Dish + Fliter + Residue	7.8426	
Weight of Residue	1.1585	
Weight Loss During Acid Treatment	1.4140	
Weight Percent Acid-Soluble Materials	45.7368	
Weight Percent Residue	37.4725	

PLM EXAMINATION OF RESIDUE (CHRYSOTILE)		**Chrysotile Point Counts (Chrysotile/Other)**					
Point Count: Number of Occupied Points	400	Slide 1:	0	50	Slide 5:	0	50
Number of Chrysotile Points	0	Slide 2:	0	50	Slide 6:	0	50
		Slide 3:	0	50	Slide 7:	0	50
PERCENT CHRYSOTILE IN SAMPLE	ND	Slide 4:	0	50	Slide 8:	0	50

HEAVY LIQUID CENTRIFUGATION	
Weight of Dish + Filter + Balance of Residue	7.7993
Weight of Balance of Residue	1.1152
Weight of Dish + Filter for Centrifugate	6.7287
Weight of Dish + Filter + Centrifugate	6.8025
Weight of Centrifugate	0.0738
Weight Percent Centrifugate	2.4798

PLM EXAMINATION OF CENTRIFUGATE (AMPHIBOLE)		**Amphibole Asbestos Point Counts (Amphibole/Other)**					
Point Count: Number of Occupied Points	400	Slide 1:	0	50	Slide 5:	0	50
Number of Amphibole Points	0	Slide 2:	0	50	Slide 6:	0	50
		Slide 3:	0	50	Slide 7:	0	50
PERCENT AMPHIBOLE ASBESTOS IN SAMPLE	ND	Slide 4:	0	50	Slide 8:	0	50
PERCENT TOTAL ASBESTOS IN SAMPLE	ND						

DETERMINATION OF ASBESTOS IN VERMICULITE-CONTAINING SURFACING MATERIAL

SAMPLE:	Pile #3 East Side	**SAMPLE #:**	49334-12
	Pile #3 East Side	**DATE:**	7/6/17
	13	**ANALYST:**	QZ

INITIAL WEIGHTS		**Comments**
Weight of Crucible	24.1863	
Weight of Crucible + Sub Sample	27.4969	
Weight of Sub-Sample	3.3106	No chrysotile detected in sample. Percent chrysotile in sample is less than the limit of detection for chrysotile in this analysis (0.0840%)
ASHING		
Weight of Crucible + Ash	26.2720	
Weight of Ash	2.0857	
Weight Loss During Ashing	1.2249	
Weight Percent Organic and Water	36.9993	
ACID TREATMENT/FLOATATION		No amphibole asbestos detected in sample. Percent amphibole asbestos in sample is less than the limit of detection for amphibole asbestos in this analysis (0.0044%)
Weight of Dish for Floats	6.6437	
Weight of Dish + Floats	6.6555	
Weight of Floats	0.0118	
Weight Percent Floats	0.3564	
Weight of Dish + Filter for Residue	6.7023	
Weight of Dish + Fliter + Residue	7.8151	
Weight of Residue	1.1128	
Weight Loss During Acid Treatment	0.9611	
Weight Percent Acid-Soluble Materials	29.0310	
Weight Percent Residue	33.6132	

PLM EXAMINATION OF RESIDUE (CHRYSOTILE)		**Chrysotile Point Counts (Chrysotile/Other)**					
Point Count: Number of Occupied Points	400	Slide 1:	0	50	Slide 5:	0	50
Number of Chrysotile Points	0	Slide 2:	0	50	Slide 6:	0	50
		Slide 3:	0	50	Slide 7:	0	50
PERCENT CHRYSOTILE IN SAMPLE	ND	Slide 4:	0	50	Slide 8:	0	50

HEAVY LIQUID CENTRIFUGATION	
Weight of Dish + Filter + Balance of Residue	7.7327
Weight of Balance of Residue	1.0304
Weight of Dish + Filter for Centrifugate	6.7033
Weight of Dish + Filter + Centrifugate	6.7576
Weight of Centrifugate	0.0543
Weight Percent Centrifugate	1.7714

PLM EXAMINATION OF CENTRIFUGATE (AMPHIBOLE)		**Amphibole Asbestos Point Counts (Amphibole/Other)**					
Point Count: Number of Occupied Points	400	Slide 1:	0	50	Slide 5:	0	50
Number of Amphibole Points	0	Slide 2:	0	50	Slide 6:	0	50
		Slide 3:	0	50	Slide 7:	0	50
PERCENT AMPHIBOLE ASBESTOS IN SAMPLE	ND	Slide 4:	0	50	Slide 8:	0	50
PERCENT TOTAL ASBESTOS IN SAMPLE	ND						

DETERMINATION OF ASBESTOS IN VERMICULITE-CONTAINING SURFACING MATERIAL

SAMPLE:	Pile #3 West Side	**SAMPLE #:**	49334-13
	Pile #3 West Side	**DATE:**	7/6/17
	14	**ANALYST:**	QZ

INITIAL WEIGHTS		**Comments**
Weight of Crucible	25.3884	
Weight of Crucible + Sub Sample	28.8345	
Weight of Sub-Sample	3.4461	No chrysotile detected in sample. Percent chrysotile in sample is less than the limit of detection for chrysotile in this analysis (0.0903%)
ASHING		
Weight of Crucible + Ash	28.0919	
Weight of Ash	2.7035	
Weight Loss During Ashing	0.7426	
Weight Percent Organic and Water	21.5490	
ACID TREATMENT/FLOATATION		No amphibole asbestos detected in sample. Percent amphibole asbestos in sample is less than the limit of detection for amphibole asbestos in this analysis (0.0034%)
Weight of Dish for Floats	6.6524	
Weight of Dish + Floats	6.7031	
Weight of Floats	0.0507	
Weight Percent Floats	1.4712	
Weight of Dish + Filter for Residue	6.6781	
Weight of Dish + Fliter + Residue	7.9231	
Weight of Residue	1.2450	
Weight Loss During Acid Treatment	1.4078	
Weight Percent Acid-Soluble Materials	40.8520	
Weight Percent Residue	36.1278	

PLM EXAMINATION OF RESIDUE (CHRYSOTILE)		**Chrysotile Point Counts (Chrysotile/Other)**					
Point Count: Number of Occupied Points	400	Slide 1:	0	50	Slide 5:	0	50
Number of Chrysotile Points	0	Slide 2:	0	50	Slide 6:	0	50
		Slide 3:	0	50	Slide 7:	0	50
PERCENT CHRYSOTILE IN SAMPLE	ND	Slide 4:	0	50	Slide 8:	0	50

HEAVY LIQUID CENTRIFUGATION	
Weight of Dish + Filter + Balance of Residue	7.8599
Weight of Balance of Residue	1.1818
Weight of Dish + Filter for Centrifugate	6.7022
Weight of Dish + Filter + Centrifugate	6.7461
Weight of Centrifugate	0.0439
Weight Percent Centrifugate	1.3420

PLM EXAMINATION OF CENTRIFUGATE (AMPHIBOLE)		**Amphibole Asbestos Point Counts (Amphibole/Other)**					
Point Count: Number of Occupied Points	400	Slide 1:	0	50	Slide 5:	0	50
Number of Amphibole Points	0	Slide 2:	0	50	Slide 6:	0	50
		Slide 3:	0	50	Slide 7:	0	50
PERCENT AMPHIBOLE ASBESTOS IN SAMPLE	ND	Slide 4:	0	50	Slide 8:	0	50
PERCENT TOTAL ASBESTOS IN SAMPLE	ND						

AGL 49334

2 DAY TAT
SAMPLES 1-9, 11-14

[redacted]

Bulk Sample Chain of Custody

Project Name:		Inspector:	Date:
BUILDING #2 TechCity		[redacted]	6/28/17
Project Number:	**Report Number:**	**Client:**	**Client Contact:**
		[redacted]	

LAB ID #	FIELD ID #	SAMPLE DESCRIPTION	CONDITION	COLOR	QUANTITY	SAMPLE TYPE
	1	Pile #1 North Side	Intact	GRY	1	NOB
	2	" " South Side			1	
	3	" " EAST Side			1	
	4	" " West Side			1	
	5	" " Misc Debris			1	
	6	Pile #2 North Side			1	
	7	" " South Side			1	
	8	" " EAST Side			1	
	9	" " West Side			1	
	10	" " Misc Debris			1	

[redacted]

S. Lugo 7/3/17 3:04 pm

Christian Hernandez 7/3/17 3:04pm

Report Must Be Used in Full

20 of 21

AGL49334

2 DAY TAT
SAMPLES 1-9, 11-14

[redacted]

Project Name: Building #2 Tech City		Inspector: [redacted]	Date: 6/28/17
Project Number:	Report Number:	Client:	Client Contact:

LAB ID #	FIELD ID #	SAMPLE DESCRIPTION	CONDITION	COLOR	QUANTITY	SAMPLE TYPE
	11	Pile #3 North Side	INTACT	Gry	1	NOB
	12	" " South Side	↓	↓	1	↓
	13	" " EAST Side	↓	↓	1	↓
	14	" " West Side	↓	↓	1	↓
	15	" " Misc Debris	↓	↓	1	

JUL 03 '17 15:19

[redacted]

Report Must Be Used in Full

S. Lugo 7/3/17 3:04pm

Christian Hernandez 7/3/17 3:04 pm

METRO ANALYTICAL LABORATORIES
255 West 36th St., Suite #101
New York, NY 10018
p: (212) 695-0165 f: (212) 695-0183

ASBESTOS ANALYSIS of BULK SAMPLE by POLARIZED LIGHT MICROSCOPY and TRANSMISSION ELECTRON MICROSCOPY

Client:	**Hudson River Valley Environmental LLC**	Contract:	**Roger O.**	**Metro Lab ID #:**	**B17070201**
Address:	350 Enterprise Drive	Client Job #:	**N/A**		
	Kingstone NY 12401	Location:	**Tech City Kingston**		
	P: (845) 514-2551 F: (845) 581-5979		**Bldg. #25 Debris**	Sample Received:	07/11/2017
			NY **NY**	PLM Analysis Date:	7/11/2017, 07/12/2017, 7/13/2(
Contact:	**Kristofer S Landell**	Sampled By:	R.T.	TEM Analysis Date:	7/12/2017, 7/13/2017
	M: (845) 514-2551	Sampled Date:	07/10/2017	Reported By:	Lupita Moreira
	E: kris@hrvenv.com	Turnaround Time:	48 hrs	Report Date:	07/12/2017

Summary of Analysis

LAB ID #	Client Sample #	Sample Description	Test	Fibrous Material	Non-Fibrous Material	Asbestos	Total Asbestos
1	1	Black Homogenous NOB GLAZING ON GLASS	NY ELAP 198.1				
			NY ELAP 198.6			Inconclusive	None Detected
			NY ELAP 198.4				None Detected
2	2	Black Homogenous NOB ROOF "LIKE" DEBRIS	NY ELAP 198.1				
			NY ELAP 198.6			Inconclusive	None Detected
			NY ELAP 198.4				None Detected
3	3	Black Homogenous NOB TAR PAPER	NY ELAP 198.1				
			NY ELAP 198.6			Inconclusive	None Detected
			NY ELAP 198.4				None Detected
4	4	Black Homogenous Granular DEBRIS	NY ELAP 198.1		100% Non-Fibrous		None Detected
			NY ELAP 198.6				
			NY ELAP 198.4				
5	5	Red Homogenous Granular DEBRIS - 2	NY ELAP 198.1	5% Fiberglass	95% Non-Fibrous		None Detected
			NY ELAP 198.6				
			NY ELAP 198.4				
6	6	Grey Homogenous Granular FLOOR TILE DEBRIS - WHTE	NY ELAP 198.1		100% Non-Fibrous		None Detected
			NY ELAP 198.6				
			NY ELAP 198.4				
7	7	Red Homogenous NOB FLOOR RED TILE	NY ELAP 198.1				
			NY ELAP 198.6			Inconclusive	None Detected
			NY ELAP 198.4				Chrysotile - <1%
8	8	Black Homogenous NOB FLOOR MASTIC	NY ELAP 198.1				
			NY ELAP 198.6				Chrysotile - Trace
			NY ELAP 198.4			1.4% Chrysotile	1.4%

Comments

Zlatan Dimitrijevic
Laboratory Director

Sameh Youssef / Sylvia Choi
PLM Analyst

Zlatan Dimitrijevic / Sylvia Choi
TEM Analyst

NYS ELAP ID # 12003

NVLAP Lab Code: 500081-0

METRO ANALYTICAL LABORATORIES
255 West 36th St., Suite #101
New York, NY 10018
p: (212) 695-0165 f: (212) 695-0183

Report Notes

General Notes and Disclaimers

• The samples analyzed in this report were not collected by this laboratory - they were received from the client, or an agent of the client, in good condition, unless otherwise noted.

• All results are calculated based on client-provided measurements.

• The report shall not be reproduced, except in full, without the written approval of the laboratory.

• This report relates only to the samples tested. It may not be used by the client to claim project endorsement by NVLAP, NYS ELAP, or any other government agency.

• All samples will be properly disposed of after 60 days.

• Quality Control data (including 95% confidence limits, laboratory / analysis accuracy and precision) is available upon request.

Notes Regarding Asbestos Testing

• Air Sample Analysis by Phase Contrast Microscopy (PCM) adheres to Method NIOSH-7400. Results < 7 fibers / mm^2 are statistically insignificant.

• Percentages are calculated using the EPA equivalent Stratified Point-Count Method.

• Bulk Sample Analysis by Polarized Light Microscopy (PLM) Friable adheres to EPA/600/M4-082-20 or NYS ELAP 198.1.

• Bulk Sample Analysis by Polarized Light Microscopy (PLM) NOB adheres to NYS ELAP 198.6. This method does not remove vermiculite and may underestimate the level of asbestos present in a sample containing greater than 10% vermiculite.

• All inhomogeneous layers of the bulk samples were analyzed separately.

• Analytical results are sometimes based on the residue percentage(s) provided by the client along with the filters. Trace denotes asbestos detected at < 1%. Smiliarly, samples below quantitation limit (RL) are reported with a less than sign (<).

• Polarized Light Microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Quantitative TEM is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos containing.

• Bulk Sample Analysis by Transmission Electron Microscopy (TEM) NOB adheres to NYS ELAP Method 198.4.

• Air Sample Analysis by Transmission Electron Microscopy (TEM) adheres to Method EPA CFR Part 763 Final Rule (AHERA).

• Air Sample Analysis by Transmission Electron Microscopy (TEM) Worksheets are available upon request.

HUDSON RIVER VALLEY
ENVIRONMENTAL, LLC

Hudson River Valley Environmental, LLC
350 Enterprise Drive
Kingston, NY 12401
Phone: (845) 514-2551
Fax: (845) 481-5979
hrvenv@hrvenv.com
www.hrvenv.com

B17070201

Bulk Sample Chain of Custody

Project Name:		Inspector:	Date:
Bld 25 Debris Tech City Kingston NY		Randy Turk	7/10/17
Project Number:	**Report Number:**	**Client:** Roger O.	**Client Contact:**

LAB ID #	FIELD ID #	SAMPLE DESCRIPTION	CONDITION	COLOR	QUANTITY	SAMPLE TYPE
	1	GLAZING on GLASS	INTACT	BLK	1	
	2	ROOF "Like" Debris	INTACT	BLK	1	NOB
	3	TAR PAPER	INTACT	BLK	1	
	4	Debris	INTACT	GRY	1	Friable
	5	Debris - 2	INTACT	GRY	1	
	6	Floor TILE DEBRIS - white	INTACT	wht	1	
	7	Floor Red TILE	INTACT	Red	1	
	8	Floor MASTIC	INTACT	BLK		

Bulk Chain of Custody	Print Name	Signature	Date	Time
Sampled by:	Randy Turk		7/10/17	1100
Relinquished by:	Randy Turk		7/10/17	1200
Received by:	S. Lugo		7/11/17	11:20 am

Turnaround Requested	Rush	24 Hour	48 Hour	72 Hour	5 Days	Other:	Positive Stop All Samples
			(48 Hour)				

CIFIED*

UDED*

*

$6.65

Origin: 12449
Destination: 10018
0 Lb 12.10 Oz
Jul 10, 17
3545050213-07

1006

PRIORITY MAIL ®1-Day

Expected Delivery Day: 07/11/2017

C010

USPS TRACKING NUMBER

9505 5150 2061 7191 0790 72

11:20 101

B1.7070201

S. Lugo
7/11/17 11:20am

FROM:

Hudson River Valley Environmental
350 Enterprise Drive
Kingston, N.Y. 12401

TO:

Metro Analytical Labs
255 W. 36th Street
Ground Floor - 101
New York, NY 10018

UNITED STATES

Appendix C: Licenses and Certifications

New York State – Department of Labor
Division of Safety and Health
License and Certificate Unit
State Campus, Building 12
Albany, NY 12240

ASBESTOS HANDLING LICENSE

Hudson River Valley Environmental LLC

72 Highwoods Road

Saugerties, NY 12477

FILE NUMBER: 15-84131
LICENSE NUMBER: 84131
LICENSE CLASS: RESTRICTED
DATE OF ISSUE: 07/20/2016
EXPIRATION DATE: 07/31/2017

Duly Authorized Representative – Kristofer Landell:

This license has been issued in accordance with applicable provisions of Article 30 of the Labor Law of New York State and of the New York State Codes, Rules and Regulations (12 NYCRR Part 56). It is subject to suspension or revocation for a (1) serious violation of state, federal or local laws with regard to the conduct of an asbestos project, or (2) demonstrated lack of responsibility in the conduct of any job involving asbestos or asbestos material.

This license is valid only for the contractor named above and this license or a photocopy must be prominently displayed at the asbestos project worksite. This license verifies that all persons employed by the licensee on an asbestos project in New York State have been issued an Asbestos Certificate, appropriate for the type of work they perform, by the New York State Department of Labor.

Eileen M. Franko, Director
For the Commissioner of Labor

SH 432 (8/12)

#25

Atlas Environmental Lab, Corp.
255 West 36th Street, Suite# 1503
New York, NY 10018
Phone:(212) 563-0400 Fax:(212) 563-0401
www.atlasenvironmentallab.com

Bulk Asbestos Report by PLM-TEM

Client: Hudson River Valley Environmental; 72 Highwoods Road, Saugerties, NY 12477
Project Name: Tech City
Project Address: Bldg. 25; Tech City, Enterprise Drive, Kingston, NY
Collected By: Client
Description: Insp.

AEL ID# BK0915180
Date Received: 9/10/2015
PLM Date Analyzed: 9/11/2015
TEM Date Analyzed: 9/11/2015
Report Date: 9/15/2015

Client ID#	Lab ID#	Location/ Description	Analyst Description	Vermiculite	ORG%	All%	ASI%	PLM			TEM
								Fibrous%	Non Fibrous%	Asbestos% &Type	Asbestos% &Type
1	BK0915180-1	Int. - Red 12x12 Floor Tile	Red, Homogeneous, Non-Fibrous	None Detected	19.6	33.9	46.6	0%	100%	NAD Inconclusive	NAD
2	BK0915180-2	Int. - Mastic	Black, Homogeneous, Non-Fibrous	None Detected	72.9	13.3	13.8	0%	100%	NAD Inconclusive	NAD
3	BK0915180-3	Int. - Red 12x12 Floor Tile	Red, Homogeneous, Non-Fibrous	None Detected	19.6	40.9	39.5	0%	100%	NAD Inconclusive	NAD
4	BK0915180-4	Int. - Mastic	Black, Homogeneous, Non-Fibrous	None Detected	73.1	14.2	12.8	0%	100%	NAD Inconclusive	NAD
5	BK0915180-5	2nd Fl. - White 12x12 Floor Tile	White, Homogeneous, Non-Fibrous	None Detected	23.0	47.6	29.4	0%	100%	NAD Inconclusive	14%CHRY
6	BK0915180-6	2nd Fl. - White 12x12 Floor Tile	White, Homogeneous, Non-Fibrous	None Detected	23.5	46.7	29.8	0%	100%	NAD Inconclusive	Not Analyzed
7	BK0915180-7	2nd Fl. - Mastic	Yellow, Homogeneous, Non-Fibrous	None Detected	38.4	44	17.6	0%	100%	NAD Inconclusive	NAD
8	BK0915180-8	2nd Fl. - Mastic	Yellow, Homogeneous, Non-Fibrous	None Detected	40.8	44.3	14.9	0%	100%	NAD Inconclusive	NAD

Atlas Environmental Lab, Corp.
255 West 36th Street, Suite# 1503
New York, NY 10018
Phone:(212) 563-0400 Fax:(212) 563-0401
www.atlasenvironmentallab.com

Bulk Asbestos Report by PLM-TEM

Client:	Hudson River Valley Environmental; 72 Highwoods Road, Saugerties, NY 12477	**AEL ID#**	BK0915180
Project Name:	Tech City	**Date Received:**	9/10/2015
Project Address:	Bldg. 25; Tech City, Enterprise Drive, Kingston, NY	**PLM Date Analyzed:**	9/11/2015
Collected By:	Client	**TEM Date Analyzed:**	9/11/2015
Description:	Insp.	**Report Date:**	9/15/2015

Client ID#	Lab ID#	Location/ Description	Analyst Description	Vermiculite	ORG%	All%	ASI%	PLM			TEM
								Fibrous%	Non Fibrous%	Asbestos% &Type	Asbestos% &Type
9	BK0915180-9	Int. - Fireproofing	Tan, Homogeneous, Friable	Present	Must Be Analyzed By Method 198.8						
10	BK0915180-10	Int. - Fireproofing	Tan, Homogeneous, Friable	Present	Must Be Analyzed By Method 198.8						

**"Sprayed on Fireproofing containing any Vermiculite (SOF-V) analyzed by NYS ELAP Item 198.8"

Quantitative Analysis (Semi/Full):Bulk Asbestos Analysis-PLM by EPA 600/M4-82-020 per 40 CFR or ELAP198.1 (friable) and 198.6 (NOB) samples for New York.

NAD=no asbestos detected, NA/PS=Not Analyzed/Positive Stop, Trace=<1%,FBGL=Fiberglass, CELL=Cellulose,CHRY=Chrysotile,Amo=Amosite,CRO=Crocidolite,ANTH=Anthophylite, TRE=Tremolite, ACT=Actinolite, NA=not applicable

PLM is not consistently reliable in detecting Asbestos in floor coverings and similar non friable organically bound materials. NAD or Trace results by PLM are inconclusive.

TEM is currently the only method that can be used to determine if this material can be considered or treated as non asbestos containing in NY State.

All samples were prepared and analyzed in accordance with the EPA "TEM Method for Identifying and Quantifying Asbestos in Non-Fibrous Organically Bound Bulk Samples" ELAP 198.4".

ORG%=Ashed Organic%, All= Acid Insoluble Inorganic%, ASI= Acid Soluble Inorganic%

NYSDOH ELAP#11999, NVLAP Lab ID: 500092-0 PLM Analyst: MT TEM Analyst: VR Approved by:

Attachment 4
New York State Department of Health - Vermiculite Evaluation Guidance Document

NEW YORK
state department of
HEALTH

Nirav R. Shah, M.D., M.P.H.
Commissioner

Sue Kelly
Executive Deputy Commissioner

June 22, 2012
(FAQ# 10 revised on August 27, 2012)

Dear Interested Party,

On April 8, 2011, a list of frequently asked questions (FAQs) regarding asbestos/fibers analysis was developed through the collaboration of the New York State Department of Health's (NYSDOH) Environmental Laboratory Approval Program (ELAP) and Bureau of Occupational Health (BOH), and the NYS Department of Labor (DOL). This FAQ was distributed to all ELAP- accredited asbestos laboratories, as well as posted on the DOL website due to a high level of interest from asbestos-related mitigation companies /consultants, training providers or other interested parties involved in the assessment, sampling and/or analysis of asbestos.

These FAQs, along with responses, were created to help clarify and interpret existing New York State guidance and regulations. However, since that time, we have received numerous inquires regarding the State's interpretation of requirements pertaining to the testing for asbestos fibers in materials that contain vermiculite. ***This informational letter is being sent to provide additional guidance and to revise FAQ # 10 regarding the State's interpretation of standard requirements pertaining to vermiculite.***

Additional Vermiculite guidance:

Material type	Testing Requirements	Explanation
Vermiculite materials used for thermal systems insulation, surfacing materials and other miscellaneous ACM *(including but not limited to: existing or new surfacing material, plaster, pipe lagging, and sprayed-on fireproofing)*	NYS ELAP Certification Manual Item 198.1 (PLM Friable) may be used	Since vermiculite materials used for thermal systems insulation, surfacing materials and other miscellaneous ACM *(such as existing or new surfacing material, plaster, pipe lagging, and sprayed-on fireproofing)* can be more constrained than loose fill, there is less of a public health concern pertaining to airborne asbestos fibers following disturbance
Vermiculite attic fill, block fill and other loose bulk vermiculite materials	*Because there is no currently approved analytical methodology to reliably confirm vermiculite as non-asbestos containing, these materials must be assumed to be contaminated with asbestos and therefore designated as ACM*	Vermiculite attic fill, block fill and other loose bulk vermiculite materials cause a greater public health concern for the disturbance and release of asbestos fibers following disturbance

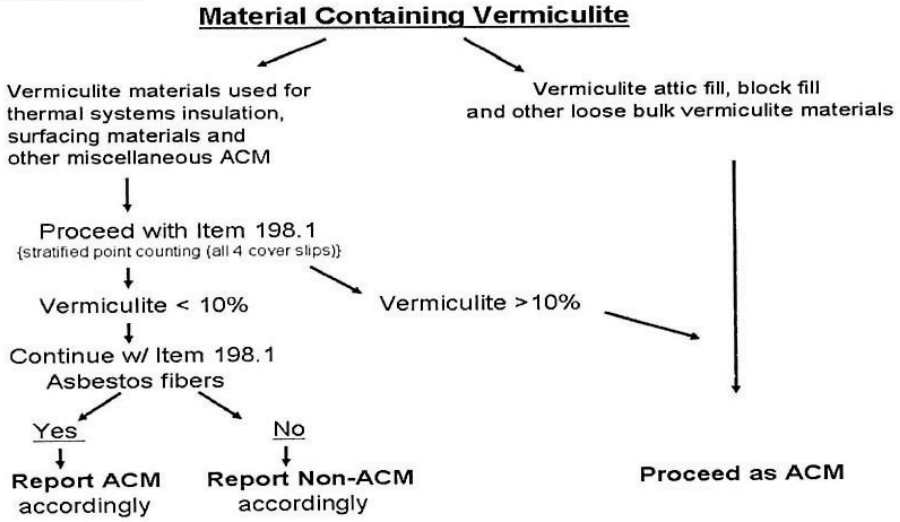
Evaluation of Vermiculite Materials:

Required evaluation criteria of vermiculite materials used for thermal systems insulation, surfacing materials and other miscellaneous ACM:

Determine percentage of vermiculite using Item 198.1 - stratified point counting (all four cover slips).

1) If vermiculite is calculated to be less than (<) 10% of the entire material composition and no asbestos fibers are detected, the material may be reported as non-ACM.
2) If ***any asbestos fibers are identified*** – analysis must proceed according to Item 198.1 PLM and reported as ACM according to Section 6.3.
3) If vermiculite is calculated to be 10% or more (>) of the material, the material must be reported as ACM.

Vermiculite decision tree:



Based upon the above guidance, please find below a ***revised answer to FAQ# 10 as of August 27, 2012***:

How can I tell if vermiculite contains asbestos or what sampling methods should be used?

According to the EPA, you should assume that vermiculite insulation contains asbestos (http://www.epa.gov/asbestos/pubs/verm_questions.html.) Historically, the majority of the world's supply of vermiculite came from the mine located near Libby, Montana, that was closed in 1990 due to high levels of asbestos contamination. Since there is no mechanism to visually distinguish between vermiculite from the Libby mine versus other mines, as well as evidence of inaccuracies by methods used to rule out asbestos contamination, EPA's guidance continues to emphasize caution when a building is being remediated especially when the origin of the vermiculite material is unknown. Accordingly, NYS Industrial Code Rule 56 lists vermiculite as a suspect miscellaneous asbestos-containing material. Since vermiculite's asbestos contamination typically ranges from 1% to 5%, vermiculite's contribution to asbestos content of vermiculite materials used for thermal system insulation, surfacing materials and other miscellaneous ACM (e.g., pipe lagging, sprayed-on fireproofing) may be assumed to be less than 1% if the vermiculite constitutes less than 10% of the total material. If vermiculite is determined to be present at less than 10% of the material content, analysis must continue to determine if asbestos fibers are present. If vermiculite is determined to be present at greater than 10% of the material content, the inaccuracies of currently available testing methods may lead to a false negative result for asbestos; therefore the material should be assumed to be ACM. (Please refer to the decision tree above for more laboratory testing guidance.)

You are reminded that this interpretation of vermiculite-related guidance does not prohibit the use or application of vermiculite materials, but instead applies during renovation and/or demolishing of structures when the origin of the vermiculite material is unknown. Note that NYS Industrial Code Rule 56-5.1(c) allows for other documentation, such as manufacturer documentation that adequately documents that a material is non-ACM (e.g., MSDS compliant with all pertinent federal regulations through EPA and Occupational Safety and Health Administration (OSHA)), in iieu of bulk sample analysis. This documentation, along with any available documentation indicating the origin of the vermiculite material being used, should be shared with the building owner(s) for future reference and consideration during renovation and/or demolishing that may be required at their building in order to avoid future concerns. Please refer to the appropriate regulations, guidance, manuals and methods as necessary for further information. For more information see the EPA website at http://www.epa.gov/asbestos/pubs/verm_questions.html.

If you have any additional questions, please do not hesitate to contact the appropriate State program listed below:

NYS DOH Environmental Laboratory Approval Program:	(518) 485-5570 **or elap@health.state.ny.us**
NYS DOH Asbestos Worker Training Program:	(518) 402-7940 or boh@health.state.ny.us
NYS DOL- Division of Safety & Health Engineering Services Unit - For ICR 56 or Variance inquires:	(518) 457-1536 or ESU.SH@labor.ny.gov